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HOEFFTCKE'S EXTENSION APPLIANCES.

DESCRIPTION OF

HOEFFTCKE'S EXTENSION APPARATUS

as applied in the Ambulatory Treatment of Fracture of the Limbs, Tuberculous and Arthritic Disease of Joints.

By C. A. HOEFFTCKE,
21, Woodstock Street, Oxford Street, London.
By Appointment to several Hospitals and Societies.

With regard to the treatment for lateral curvature the opinion of the medical profession is widely divided.

The treatment by exercises and massage only, without any mechanical support, has had a prolonged trial, with indifferent results, judging from the number of cases for which my Corsets are now ordered. The sight of the deformed spines which have for years been treated at various hospitals and ultimately sent away with the remark to the patient, "We are sorry, but we can do no more for you," is appalling. Anyone who professes to be able to cure a pronounced lateral curvature—not a hysterical case—by any means—exercises or apparatus—is, in my opinion, deceiving himself and the patient. The most that can be done is to arrest the deformity, and probably obtain a great improvement. Only in slight cases, and when the patients are young, can a perfect cure be expected.

Massage and exercises are indeed the ideal treatment if the improvement thereby obtained in the shape of the spine can be maintained by a suitable support when the muscles are relaxed. A great deal of use can be made of plaster-of-Paris for patients who are treated in the hospital, as they can be watched by the nurses. The great disadvantage of plaster jackets is the great weight and uncleanliness. If the jacket is made to take off in two parts it loses much of its effectiveness.

Of late years plaster-of-Paris has been superseded by leather, specially prepared, which is much lighter and can be taken off when necessary without losing its shape. If the leather is properly treated it gets very hard but still retains a certain amount of elasticity which allows of it being opened out and taken off at night, or for ablution purposes, while maintaining its shape. Having had so much experience, I shall be pleased to show any surgeon how a plaster cast is taken, or how a patient is put up in plaster.

When a curvature is in the lower lumbar or middle dorsal region, the ribs just under the axilla and the pelvis should be used as resisting points to maintain extension in the spine; arm crutches are mostly useless. When a curvature is in the upper dorsal region, a head extension appliance has to be added.

The gratifying results of cases which can only be attributed to the application of this appliance, bear out the opinion of many well-known surgeons who consider Hoefftcke's Corset (patented 1902), where necessary with head extension, to be the most skilful appliance yet devised to maintain extension in the vertebral column.

Hoefftcke's Corset is made in the following way:—The patient is suspended by the head in a Sayer's extension appliance, and a plaster cast taken of the trunk, while the spine is extended as much as possible.

Specially prepared leather is moulded on to the positive obtained from the plaster cast, and sometimes strengthened in places with very narrow strips of steel; it is perforated for ventilation. The lacing pieces in front of the Corset are made of strong elastic webbing to allow for expansion for breathing purposes. The leather over the prominent part on which it is desired to make pressure is cut for three-fourths of its circumference, forming a flap, the portion nearest the mid-line of this flap being left to act as a hinge.

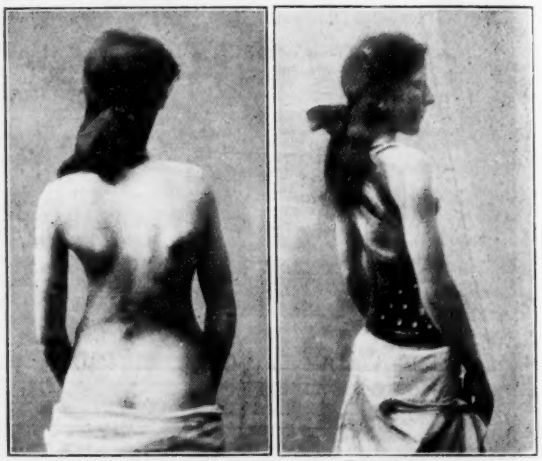
A broad webbing strap passes over this flap wherewith a considerable amount of pressure can be brought to bear upon the deformed parts. The head support (see Fig. 4) has to fit exactly on to the mandible and occipital bones, the steel bars are hinged on each side of the collar to allow for backward and forward movements of the head, and the extension is obtained by means of elastic webbing, which can be adjusted higher or lower with leather straps in buckles fastened on to the Corset in front.

The patient is usually half an inch taller with the Corset on; sometimes with a flexible spine the difference is three-quarters to one inch.

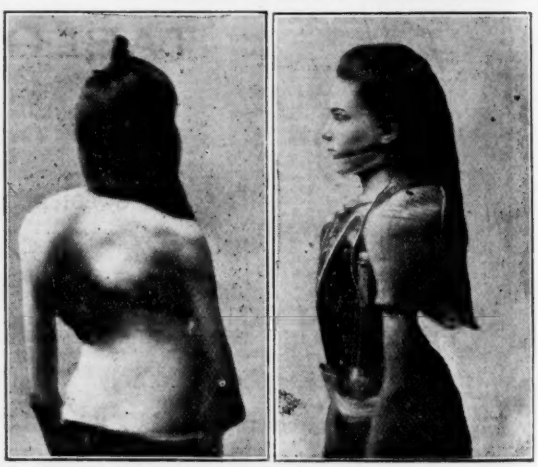
To maintain pressure on the deformed part at night time I make a bed of plaster-of-Paris or leather, which is accurately moulded to the whole dorsal surface of the patient from the head to the heels. It fits with the utmost accuracy, with the result that the patient can lie on the back without the slightest discomfort. To the middle line of the bed I attach a broad band of webbing at a point corresponding with the centre or most prominent part of the dorsal convexity or hump, which passes laterally across the convexity and is attached to a horizontal iron bar fixed on the bed. The convex ribs rest upon this band of webbing, which are consequently continually subjected to considerable pressure in an anterior direction by means of the weight of the body. The band of webbing can be adjusted to regulate the pressure.

Extract from BRITISH MEDICAL JOURNAL.

"'Hoefftcke's Corset for Scoliosis.' After four months' trial on a suitable case, a certain amount of improvement is discernible. The patient states, moreover, that the support is very comfortable."



N. V. (æt. 11).—Hoefftcke's Corset with Torsion Flap applied.



E. P. (æt. 14), 19th July, 1905. Severe case of Scoliosis. For two years in spinal carriage; unable to walk. Hoefftcke's Corset with head extension applied; was able to get up and walk within two weeks. She has improved greatly, and is now following her duties as private secretary without any hindrance.

E. P. (æt. 16) 27th July, 1907. New Corset and head extension.

E. P. (æt. 20). 10/9/11. I have just received a letter from this patient saying that the instruments are now old and out of repair after four years' wear, and she would be glad if I would arrange to see her and make some new ones. She also writes (10/9/11): "The instruments I have had from you have done me much good. ..... I think you will be pleased to see how well I have progressed."

In addition to the description of my apparatus in THE LANCET of Jan. 28th, Feb. 25th, March 25th, April 29th, May 27th, June 24th, July 22nd, and August 12th, the use of my appliances will be described in THE LANCET on Sept. 16th, Oct. 21st, Nov. 25th, Dec. 23rd of this year on the page facing the lecture page of the journal.

I shall always be pleased to send a detailed description with illustrations upon application, but in no case do I supply any appliance without medical supervision.

ABSTRACT OF A

Presidential Address

ON

A REVIEW OF THE VITAL STATISTICS OF IRELAND SINCE 1864.

Delivered before the Vital Statistics Section of the Congress of the Royal Institute of Public Health, Dublin, on August 15th, 1911,

BY SIR WILLIAM J. THOMPSON, M.D.,

REGISTRAR-GENERAL FOR IRELAND.

GENTLEMEN,—The reason for taking 1864 as the starting-point is that the General Register Office for Ireland was first opened on Jan. 1st of that year, 27 years in the wake of the English Office and nine years after that of Scotland. This office, as it is now constituted, is therefore 47 years old, although the registration of Protestant marriages dates back to 1845, so that we are able to review approximately half a century's record of marriages, births, and deaths.

DECREASING EMIGRATION.

I think we can safely say there is no country in Europe which has so steadily declined in population as Ireland since the year 1845. From a comparative view of the Census populations for nine decades it will be seen that the population increased in 1831 and 1841, and that decreases were recorded in 1851, 1861, 1871, 1881, 1891, 1901, and in 1911. We observe with pleasure that the decrease for the last decennial period is only 1·7 per cent.

The first published annual report of the Registrar-General for Ireland was that for the year 1864, and the last for the year 1910. The birth- and death-rates have varied little for the past 30 years; the marriage-rate shows an upward tendency, and the rate for emigration a decided fall. We have good reason to be pleased with the birth-rate, seeing that in France, England, the United States, and other countries it shows a steady and continuous decrease. That it has shown so little variation in this country is the more remarkable, having regard to the high rate of emigration during the past 30 years, and to the fact that practically 85 per cent. of emigrants leave between the ages of 15 and 35, the period in the life of the individual which is of the most economic value to the State. The average annual number of emigrants for the ten years 1900–1909 was 35,886—a very great decrease on the ten years 1890–1899, the average annual number emigrating being 44,955—while going back for a further decennial period, 1880–1889, we get the appalling average annual number, 80,491. Comparing the number of emigrants last year, 32,457, with this figure, 80,491, we see that the emigration-rate in the ten years 1901–1910 was practically only half what it was in the decade 1881–1890. The emigration figures for the present year, up to the end of July, show a decrease of 353, as compared with the same period of last year. The average yearly decrease in emigration for the period 1900–1909 is having its effect on the marriage-rate, which for the past 20 years has, if anything, increased, a good sign of increasing prosperity, as it is generally recognised that people do not engage in matrimony in times of commercial or agricultural depression.

PRINCIPAL EPIDEMIC DISEASES.

If we investigate the death-rate further, which in the period under review has shown a tendency to fall, we find that the deaths from practically all the principal epidemic diseases have become less in number. Taking quinquennial periods from 1866 to 1910, in the first of these periods the rate for scarlet fever was so high as 5·5 per 10,000 living, at which figure it remained for about 10 years. It then commenced to fall and has continued to do so steadily ever since, until it has now reached the low figure 0·3. The reduction of this death-rate is Ireland is much to the credit of the medical profession and all those working in the field of public health.

An investigation of the rates for typhus fever shows that the death-rate has fallen from 1·4 in the quinquennial period, 1871 to 1875, to 0·1 in the last period shown.

We come now to enteric fever, the death-rate for which has fallen from 1·8 per 10,000 for the period 1871–1875 to 0·8 for the period 1906–1910. Typhoid fever, considered generally, is a disease of middle life, and the saving of life at that age is a most valuable asset to the country. These three fevers—scarlet fever, typhus, and typhoid—are compulsorily notifiable diseases, and the substantial reduction of their death-rates in Ireland is a strong, and, in my opinion, an unanswerable, argument in favour of compulsory notification of infectious diseases. This point comes out more prominently and forcibly when we examine the charts for measles and whooping-cough, epidemic diseases which are voluntarily notifiable. From the chart for measles we see that the death-rate per 10,000 living was 1·9 for the period 1866–1870, and 1·4 for the period 1906–1910. Again, the death-rate for whooping-cough only shows a fall of 0·9—viz., from 3·3 to 2·4 for the same periods. The Registrar-General can only deal with figures, not with causes and effects, but this point—viz., that the death-rate for infectious diseases which are compulsorily notifiable has decreased much more than that for infectious diseases which are voluntarily notifiable—is one, in my opinion, deserving the serious consideration of all those who have the health and welfare of our country at heart.

TUBERCULOSIS.

Tuberculosis is now recognised as an infectious disease, and the active campaign carried out as a part of the propaganda of the Women's National Health Association, an association inaugurated, guided, directed, and presided over by the President of our Congress, reinforcing and coöperating with the efforts of local health authorities, has had a most telling effect since its inception in 1907, as shown in the reduction of the death-rate in four years from 2·7 to 2·3 per 1000 living, the lowest rate yet recorded. There were 1663 fewer deaths from tuberculosis in 1910 than in 1907, representing a decrease of no less than 32 deaths per week as compared with the number in 1907. We will now consider the death-rate for males and females (*a*) from all forms of tuberculosis and (*b*) from phthisis. We see these are about equal. It will be seen that the female sex has the higher death-rate between the ages 10–15 and 15–20, the figures for the first period being: females, 1·7; males, 0·9; and for the second period: females, 2·8; males, 2·1 respectively; while for all the other periods (except the last, 85 years and upwards) the male death-rate is the higher, particularly so in the period 45–55, when it is 2·7, the female rate at that period being 1·9. This is the first time this point has been so clearly brought out, and it is most instructive.

INFANTILE MORTALITY.

When we come to consider the deaths of infants under one year, our general death-rate in Ireland for such is comparatively low, and we compare favourably with both England and Scotland. The rate of infant mortality for the three countries is: for Ireland, for the year 1909, 92 per 1000 births registered; England, for the year 1909, 109 per 1000 births registered; Scotland, for the year 1908, 121 per 1000 births registered. In 1910 our rate increased slightly—95 per 1000 births. For the past few years the infant mortality rate for England has decreased, whereas ours has remained about stationary. In England and Scotland a vigorous campaign, both voluntary and in connexion with the Early Notification of Births Act, has been going on in regard to this high infant death-rate, with beneficial results in England. In Ireland the infant death-rate in Dublin, Belfast, and Cork compares somewhat unfavourably with some of the great English and Scotch towns, but the rate in the rural districts, as in all agricultural countries, is low, hence our average rate is less than three figures. There is, therefore, an opening in these three cities for good and effective work.

The principal causes of deaths of children under one year are atrophy and debility, which are practically double that of diarrhœal diseases. A large number of these deaths might be prevented. We cannot, I think, blame the mothers too much, because they have never had the opportunity of being instructed in the management of infants, and lack of nourishment from absolute poverty and the evils consequent on overcrowded and bad housing are responsible for much. Efforts in these directions, however, are now being made, both by municipalities and philanthropic associations. Ireland has been a pioneer, for instance, in the establishment of Babies'

Clubs, another of the many good works inaugurated under the auspices of your noble President.

INFLUENZA AND CANCER.

Turning now to diseases which show an upward death-rate tendency, influenza and cancer stand out most prominently. Twenty-two years ago influenza was almost unknown amongst us, but for the past 21 years it has claimed a great number of victims. The rates of death for this disease are particularly high for the two years 1892 and 1900 respectively. I think the medical profession will agree with me that the deaths from influenza are too numerous. This is owing, in a great measure, to the fact that it often comes on insidiously, and patients or their friends do not recognise its seriousness, with the result that the doctor is not called in until too late. Incidentally this leads up to another subject, the high percentage of uncertified deaths in Ireland as compared with England and Scotland. It is a well recognised fact that no profession does so much gratuitous work as the medical profession, and there is, therefore, no cause for such a large percentage of uncertified deaths, medical aid being easily procurable for our poorest people.

The other disease which has increased, not only in Ireland, but also in England and Scotland, is cancer. Last year there were no less than 3664 deaths registered in Ireland from malignant disease. The death-rate from cancer in Ireland has risen from 2·7 per 10,000 living in 1864 to 8·4 in 1910, an increase of 5·7. In England the increase has been 5·6, from 3·9 per 10,000 living in 1864 to 9·5 in 1909, and in Scotland the death-rate for this disease has ranged from 4·3 in 1864 to 9·6 in 1908, an increase of 5·3. Ireland shows a greater increase than England or Scotland. It is asserted by some medical authorities that this is more apparent than real and that the increase is due, in part at least, to a more accurate diagnosis of malignant disease. This is a theory which it is difficult to contradict definitely, and, if true, it applies equally to England and Scotland. With the advance of medical education and the introduction of post-graduate classes medical men are more scientifically trained, and, consequently, likely to be more accurate in diagnosis. Besides, certain morbid conditions are now classified as cancer that some quarter of a century ago were not placed in this category.

SUMMARY.

Summing up the deductions from this review of Irish vital statistics for the past 47 years, we find that (1) emigration has enormously decreased; (2) the birth-rate, notwithstanding emigration and a decreasing population, has remained almost stationary; (3) the marriage-rate has increased of late years; and (4) the death-rate, after many fluctuations, is decreasing. If to these we add some facts which have been brought out in the preliminary report of this year's Census, facts of such significance as would require a separate paper—(*a*) the number of inhabited houses in Ireland has increased; (*b*) the number of houses being built has also increased; (*c*) the number of families has increased; (*d*) the number of uninhabited houses has decreased—we cannot do otherwise than conclude that Ireland is to-day a better, healthier, and more prosperous country than it was half a century ago.

ELEMENTARY MEDICAL TRAINING FOR MISSIONARIES.—Much attention has recently been devoted to the preparation of missionaries for work abroad, and it has been shown that some elementary knowledge of medical subjects is a necessity for all. The time which should be spent in this study varies according to the part of the world in which the intending missionary expects to work, those labouring in isolated spheres needing the longest periods of training. Livingstone College, which makes special provision for this branch of missionary training, has arranged courses of study, theoretical and practical, suitable for the case of all men going to the foreign mission field, varying in length from nine months, which is the full session, to one week of lectures on tropical hygiene. This last is the only course which is open to women as well as men; not that it is less necessary for women to have some knowledge of elementary medical subjects, but because in their case a short course of practical nursing is probably the best preparation for missionary life abroad. The principal of the college will be pleased to advise any who will write to him at Livingstone College, Leyton, E. The new session will commence on Oct. 2nd.

A Clinical Lecture

ON THE

TREATMENT OF CONSTIPATION.

Delivered at the Queen's Hospital, Birmingham,

BY SIR JAMES SAWYER, M.D. LOND., F.R.C.P. LOND., F.R.S. EDIN.,

CONSULTING PHYSICIAN TO THE HOSPITAL; EX-PROFESSOR OF MEDICINE IN THE BIRMINGHAM MEDICAL SCHOOL; LATELY LUMLEIAN LECTURER AT THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

GENTLEMEN,—When you enter into your practice, perhaps the treatment and the cure of habitual constipation will engage your attention oftener than other details of our remedial art. Although this subject is of the tritest, it is well worth frequent revision. We must keep it always in our minds in our daily work as medical men, and it becomes us to reconsider it often by the lights, respectively and combinedly, of physiological, clinical, pathological, and therapeutic progress. In this great subject, as in so many others of ours, clinical observation and physiological investigation go on working together in converging directions, with the best results in practice, sometimes the one anticipating, and each confirming, the other.

Constipation is retarded progress of fæces from the cæcum to the rectum, or it is retention of fæces in the rectum (dyschezia), or it is both of these. In our conceptions of the causes, progress, and cure of habitual constipation we must include the knowledge that human fæces consist in great part of excrementitious matters excreted by the glands of the intestinal mucous membranes as well as of insoluble and superfluous food, mixed with intestinal mucus and biliary and pancreatic excretions. Human excrement, then, is made up of glandular and other excretions, as well as what may be called alimentary refuse. We must recognise both these factors and not contemplate the dietetic effluent only. The manifold errors of what may be called habits of life and ways of living, of defæcational effort, and of diet, which are causal as to constipation, are well understood. In their continued and persistent rectification may be found the cure, without the exhibition of drugs, of most of the slighter forms of costiveness. In a severer case, in one in which drugs, manipulative efforts, and even instrumental aid cannot be avoided, all that well-ordered and daily habits, well-directed efforts, and well-chosen diet, can accomplish—and they can accomplish much—are indispensable adjuvants of mere physicking in the cure of habitual constipation under skilled medical guidance.

There are three canons which should guide your treatment: (1) You should not leave the medicinal treatment of their constipation to your patients; (2) you should not prescribe a drug in the treatment of habitual constipation until you find that the constipation in the particular case before you cannot be cured without drugs; and (3) you should not prescribe drugs in the treatment of habitual constipation without the conjoined use of a judicious combination of the numerous adjuvants of natural alvine relief which are at your disposal, and which you should select especially accordingly to your experience of their use in practice, and combine them in particular cases of costiveness suitably to the individualities of your patients.

You should ascertain fully the characteristics and ways and circumstances of life of each patient, and then arrange the details of your treatment in each case upon such knowledge. In all therapeutics the individuality of the patient is the supreme law. None but a skilful prescriber can treat constipation best. To "open the bowels," to force the appearance of a copious "stool," cures not constipation, but only relieves for a few hours one of its symptoms.

The second of these canons you should remember, that of withholding drugs until drugless methods shall have failed, is a counsel of perfection which is basic in its aim, and should be followed generally; but the insistence of constipated patients for a purgative dose teaches one that patients are sometimes right in this matter (perhaps *fas est ab ægro doceri*), and that medicinal catharsis may give a fair

start for a cure in some cases, which you will be able to distinguish in practice, by disciplinary and dietetic methods. Sometimes an immediate evacuation is desirable, but no real cure of the malady is possible unless disciplinary and dietetic methods have play.

In costiveness our therapeutic clues arise well from an old definition of it—namely, "in constipation the fæces are hard, and may be retained from that cause, from weakness of the muscular coat of the large intestines, or from diseases of the anus, making defæcation difficult or painful." Habitual constipation is a penalty of our imperfect civilisation. It is due to habitual abstinence from emptying the rectum whenever the natural impulse thereunto, the physiological call for defæcation, is felt; it is due to habitual attempts at defæcation when seated upon the usual seat, 18 inches high; it is due to habitually diminished activity of the psoæ and iliaci, of the respiratory muscles, and of the muscular fibres of the large intestines, and to rectal paresis from rectal distension; it is due to habitual abstinence from fruits and other vegetable foods rich in cellulose. It is due in some women from habitual diminution of beverages, from the design of minimising urination. It is due to insufficient mastication of food, especially of meat. The curative treatment of habitual constipation may have to begin in the mouth, and it may be upon the dinner plate. Each of these causes is avoidable. Each of these causes must be sought out and avoided before a drug be taken for the treatment of habitual costiveness; if the avoidance of these causes should not be curative, such avoidance should concur continuously with all medicinal exhibition.

Many hearts throb to the fetich of a punctual fæx. By long-continued habit in health the act of voiding fæces can become to some extent a rhythmical process, done at a fixed time, by an acquired periodicity each 24 hours. Perhaps the best time is after breakfast. Before bed is the best time for a patient who has hæmorrhoids. Defæcation strains and protrudes piles, and the horizontal rest of a night in bed yields venous subsidence. Chosen the time, the voiding effort should be made daily, at the chosen time, whether the "call" to defæcation be felt or not. Besides this, defæcation should always be attempted immediately whensoever the rectal prompting thereunto shall arise. Such feeling, such *mens conscia recti*, should never be "put off" By putting it off the rectum empties itself, if it can, into the sigmoid flexures, or the feeling of rectal pressure subsides in the exhaustion of the local neuro-muscular sense into an unfelt rectal retention of fæces, and habitual constipation, with or without dyschezia, with or without rectal coprostasis, is caused and kept up. Perhaps this holding up of returned fæces in the sigmoid bendings may be a determinant of cancer there. Cancer there is much more frequent in men than in women. Women are more likely than are men to neglect to try defæcation at a rhythmical time; but men put off the act more than women do. Men like to defæcate at a given time, and at no other time. Again, as between the sexes, habitual constipation is more frequent amongst women than it is amongst men, from irregularity in the time of alvine effort, from procrastination therein, from intrinsic feebleness of the muscular factors of defæcation, from the wearing of waist-belts, of "stays," of corsets, of tight skirts, and from "inimbition."

The best position of the body for the complete accomplishment of the act of defæcation is the natural one, in crouching. In such a position only are the parts acting in the proper voidance of fæces in the best position for doing it; the anus is in the best position for opening and the rectum for emptying its contents, all the muscles concerned in the act are in the best position for their efficient play, and the parts liable to injury from strain are guarded by their natural protections, certain hernial orifices, for example. Failure of defæcation upon the usual seat will often at once issue successfully if the effort be renewed forthwith in the physiological attitude.

In a case of habitual constipation you should amplify and explain these considerations to the patient, and counsel acting upon them before placing perilous reliance upon purgative drugs. Further, you should keep in mind that certain faulty and habitual somatic postures are apt to lead to, and to keep up, sluggishness of fæcal movement in the larger bowel, even to coprostasis—namely, stooping forwards, slouching, and slackness of attitude and gait, and especially that form of arching backwards of the lower spine and doubling-up of the belly which occurs while sitting "all in a heap" in a large and low "easy" chair. Such habits of bodily postures are declared by the production of transverse wrinkles in the skin across the epigastrium. Look for these wrinkles in every case of habitual constipation, and counsel correction of postures which cause them. These postures hinder and hamper normal movements of the contents of the belly in many ways and with many ill-effects. They tend to the production of two more angles in the greater gut, one in the ascending colon and one in the descending colon, by an antero-posterior bend on each side, below the hepatic and the splenic flexures respectively.

So there must be physical uprightness in the cure of habitual constipation before drugging, and, if you give drugs, during their exhibition, and always, excepting during horizontal rest, afterwards. One of the many good physicians who were also fair poets wrote long ago:—

> "To lean for ever cramps the vital parts,
> And robs the fine machin'ry of its play."

Daily bodily exercise, especially out of doors and in the sunshine, favours defæcational normality. In the successful treatment of habitual constipation further helps may well be given by exercises which promote biliary flow, such as developed respiratory movements, by physical exercises which bring into play the muscles of the abdominal walls, and by such exercises as promote movement of those portions of the larger intestine in which fæcal stagnation is most apt to occur, that is in the cæcum and in the sigmoid flexures, for which last the psoæ and the iliaci must move well, as in running up stairs two steps at a stride, or as in "knees-up" exercises.

The best diet in the cure of costiveness is what is known as a mixed diet, the ordinary diet in use in English households. If, in a person living upon such diet, habitual constipation does not yield to habitual and physiological alvine effort, aided by suitable physical exercises of the kind I have described briefly to you, then food of a laxative character—that is, foods full of cellulose—should be increased in the dietary, such as cooked green vegetables, fruits, fruit jams, and chiefly marmalade of oranges. The fibres of cellulose appear to be the chief natural stimulant of the muscular movements of the intestines, as was shown, especially in favour of preparations of oranges, by certain striking experiments a few years ago.

Cathartics increase the peristaltic movements of the human intestinal canal, evacuate its contents, usually augment its mucous secretions, and often promote the separation of the secreted products which Liebig taught us it is the province of the intestines to separate from the blood and from the tissues. These medicines may be distinguished according to their energy of action as laxatives, which promote the gentle evacuation of the intestinal contents, and purgatives, which increase secretion and accelerate evacuation. This was Royle's and Headland's practical and excellent definition of them, and it is a good one to keep in mind in our prescriptions. Numerous are the cathartics at our disposal; their distinctions and several utilities are well known in medical practice.

For a case of habitual constipation which does not cure without medicines my favourite remedy is Socotrine aloes, suitably combined and exhibited as a pill, at bedtime. "Myrrh and aloes and cassia" can still make coprostatics glad: myrrh, with its old repute of giving an impetus to the digestive organs, and an increase of muscular power to the digestive canal, Socotrine aloes and cassia pulp, of each equal proportions, made into a pill of the weight of 5 grains with syrup or with castor oil. One pill or more may be given for a dose, as found to be needed, and their administration should be gradually reduced and omitted altogether so soon as may be. I give you this formula only as an example.

Many other cathartics are at our therapeutic disposal in pilular and in other forms, and you must learn to choose from amongst them by your experience in practice according to the particular indications in each patient. No case of habitual constipation can be treated by "rule of thumb" It will always be your duty to your patient and to yourself to investigate each case skilfully, by complete methods, with your full acumen, and by adequate clinical study of it, as to the causal relations and other associated details of the malady in the

individual instance of it in question, as to sex and as to temperament, and each case must be diagnosed *in propriâ personâ* and individually prescribed for, watched, and guided by an experienced adviser in the science and art of medicine. Faulty habits of life must be corrected appropriately, diet must be confirmed or rearranged if need there be, and you must make a suitable selection of medical gymnastic exercises, to restore and improve the health of the body at large, and of the intestines in particular, and fitting medicaments must be prescribed if their employment be unavoidable. And all this must be done with a lively remembrance of the manifold conditions which ever modify the effects of medical treatment, for, as one of the best therapeutists of a recent day, Dr. Scoresby-Jackson, taught, "the general habits of the patient his profession, business, or occupation, his diet, and other circumstances connected with his daily pursuits, influence the actions of medicines; and there are certain indications of treatment in the cases of the rich and the poor, the spare and the plethoric, the man of active and the man of sedentary habits, which are far more easily learned from careful clinical observation than from volumes of literature."

For counsels of perfection in the cure of habitual constipation you must win and sustain the patience and perseverance of your patient, and you must have the courage to insist that the habitual use of cathartics alone to meet a troublesome symptom is harmful, and may lead to the worst results.

A CASE OF ACUTE POLIOMYELITIS IN AN ADULT.

BY C. M. HINDS HOWELL, M.D. OXON., F.R.C.P. LOND.,
PATHOLOGIST TO THE NATIONAL HOSPITAL FOR NERVOUS DISEASES, DEMONSTRATOR OF PHYSIOLOGY AT ST. BARTHOLOMEW'S HOSPITAL, PHYSICIAN TO THE GREAT NORTHERN HOSPITAL;
AND
B. T. PARSONS-SMITH, M.D., B.S. LOND.

CASES of acute paralysis of sudden onset, rapid progress, and fatal termination are fortunately not common, if vascular lesions of the brain are excluded. The difficulties of correct diagnosis in the early stages of such attacks of acute paralysis are very considerable, and in a large number of fatal cases no adequate pathological examination has been obtained. There is a special interest therefore attaching to cases in which a microscopical examination has been possible, and it is for this reason that we think the details of the following case, which occurred in the practice of one of us (B. T. P.-S.), worthy of record. It is greatly to be regretted, however, that the circumstances of the case did not allow of a perfectly satisfactory pathological examination being made. Although it was quite possible to make a definite diagnosis from the material which was obtained, no bacteriological examination was made, nor were any inoculation experiments on monkeys or other animals possible. The following is a brief record of the clinical aspects of the case.

The patient, aged 22, complained of headache and general debility on August 22nd, 1910, which compelled him to return early from business. His previous health had been very good, and so far as is known he had not been exposed to any infection previously to the onset of his illness. It is noteworthy that a brother shared his room with him, and had been in close contact with him in the period immediately preceding the onset of the illness. This brother and the other members of the family remained in perfect health. The patient passed a very restless night on August 22nd, and his condition was obviously worse the next morning. He vomited frequently, the pulse was rapid, and he was evidently extremely ill. During the evening he complained of severe pains in the lower part of the back, and at the same time noticed that the legs were decidedly weak. During the night power in the legs was completely lost. On examination the following morning the patient was observed to be lying perfectly still, breathing with some difficulty, and at a rapid rate—viz., 38 per minute. The pulse was 120, of small volume and low tension. The face was pale and perspiring, the mouth was open, and the alæ nasi working. The temperature was 100° F. Intelligence and memory were unimpaired. With regard to the motor system, movements of the head and facial muscles were possible, and there was no ocular palsy or other cranial nerve defect at this time. The upper extremities were markedly paretic, and coördinated movements were carried out only with great difficulty. There was marked hypotonia of the muscles. The trunk muscles were more affected, the intercostal muscles acting hardly at all, and the diaphragm only very weakly. The patient was quite unable to make any attempt to raise himself in bed. The lower limbs were quite powerless and flaccid. Sensation was absolutely normal, the patient recognising all forms of sensory stimuli readily, naming them correctly and without difficulty. The deep reflexes (sphincters) were unaffected, but the tendon reflexes were all absent, and no superficial reflex could be obtained. During the afternoon the paralysis progressed rapidly and became complete in the trunk and upper limbs. It spread further, however, and involved the tongue and facial muscles to some extent. Speech now became slow and difficult, though consciousness was fully maintained. Respiration became more shallow, and the patient died at 8.30 P.M. on August 24th, two days after he was first taken ill.

The spinal cord and a portion of the cerebral cortex were received for microscopical examination. Sections were made and stained by the following methods—Marchi, Nissl, and hæmatoxylin and Van Giessen.

Cortex.—Nothing abnormal was found in the portions of cortex examined, nor in the meninges, blood-vessels, or nerve cells.

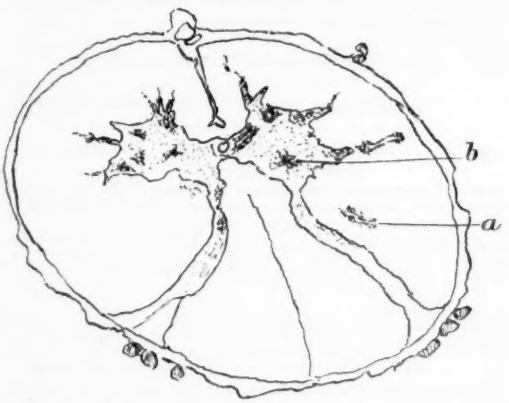
Spinal cord.—The Marchi method, as might be supposed, owing to the rapid course of the disease, showed no changes. In the following examinations the hæmatoxylin and Nissl methods were used:—1. Meninges: For the most part the meninges were quite normal, and there was no widespread inflammatory exudation into them. In a few places, however, particularly in relation to the anterior spinal artery, posterior spinal arteries, and in the anterior fissure of the cord there was a slight amount of small, round-celled exudation, which was most conspicuous in a perivascular distribution, though it extended actually beyond the immediate vicinity of the blood-vessels. 2. Blood-vessels: (*a*) Meningeal blood-vessels: No gross defect was noted in connexion with these, beyond the patchy perivascular exudation referred to above. There was no evidence of thrombosis, though the vessels were considerably engorged. (*b*) Intra-medullary vessels: The same perivascular cell exudation was to be seen in these vessels both in the white and grey matter. The vascular engorgement was marked, but there was no evidence at all of any thrombosis having occurred. The cells of the inflammatory exudation seemed to be almost all of the lymphocytic type, but there were a few endothelial cells also present. Polymorphonuclear cells were conspicuously absent. 3. The spinal cord itself: Throughout the whole cord from the sacral to the cervical region the grey matter macroscopically had appeared darker than normal, and on making microscopical sections was found to be the seat of widespread inflammatory changes. The extent and distribution of these changes are indicated in the diagrams (1, 2, 3). It will be seen that, with the exception of the perivascular exudation in the meninges and in the white matter, the inflammatory changes are confined to the grey matter. It will at once be evident, on glancing at the diagrams, that the cell exudation is not confined to the anterior horns, but that the changes are very intense also in the vicinity of Clarke's column and in the posterior horns. The inflammatory change in the grey matter was diffuse throughout the whole length of the cord, while here and there dense foci of cell collections were to be seen. Some of these were perivascular, but the majority did not appear to be so. The cells of this inflammatory exudation were, in part at least, lymphocytiic in character, but there were numerous other cells the nature of which it was not easy to determine. They did not appear to be derived from the blood, and were probably in part derived from the vessel wall, and in part a product of neuroglia proliferation. A few plasma cells were seen, but they were rare.

With regard to the nerve cells of the grey matter, a striking feature was the alteration in the ventral horn cells. Both in the cervical and lumbar enlargements many of these cells had disappeared altogether, or existed as mere ghosts of their former selves. Those that remained showed every stage of

chromatolysis, and practically not a single quite normal ventral horn cell remained. The cells of Clarke's column appeared to have survived better than the ventral horn cells, but they, too, were seriously affected. Unfortunately, the bulb and pons were not available for examination, so it was impossible to determine the upper limit of the inflammatory process, but clinically it had reached the facial nucleus in the lower part of the pons. The involvement of the pons only occurs in very severe cases, and is uncommon even in them.

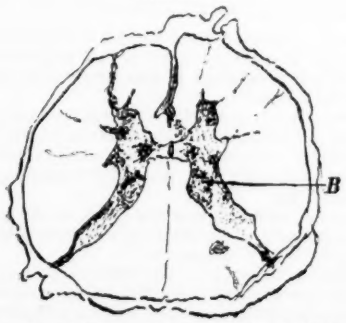
The pathological evidence makes it quite clear that the case was a very severe and widespread one of acute poliomyelitis. The clinical evidence during life was not so conclusive, the first diagnosis, which was offered tentatively, being that of Landry's paralysis, the chief reason for this diagnosis being the ascending character of the paralysis, the patient's age, and the absence of sphincter involvement.

FIG. 1.



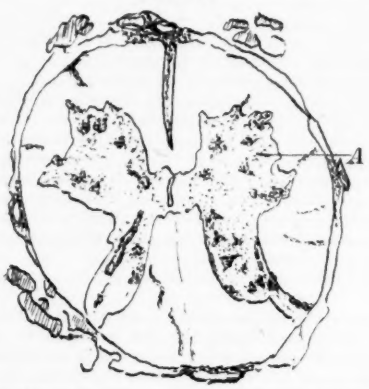
Upper cervical segment of spinal cord. Diffuse infiltration with foci of more acute inflammatory reaction (*b*), chiefly in anterior horns, but the posterior horns have not escaped. Vessels in white matter (*a*) show perivascular exudation of small round cells. (Edinger projection × 5.)

FIG. 2.



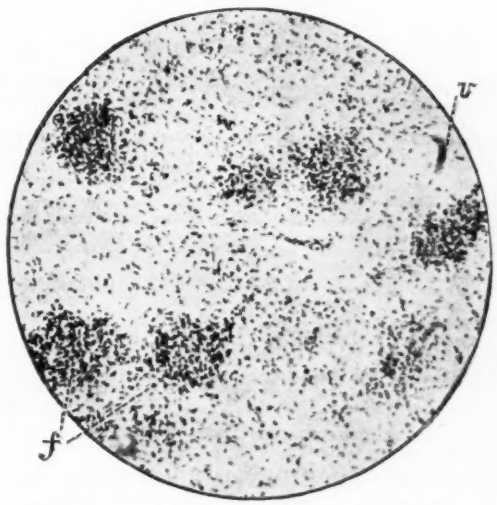
Lower dorsal segment of cord. Infiltration of whole of grey matter. Clarke's column suffers particularly. Intramedullary vessels of white matter show inflammatory changes. B = microphotograph, Fig. 5. (Edinger projection × 5.)

FIG. 3.



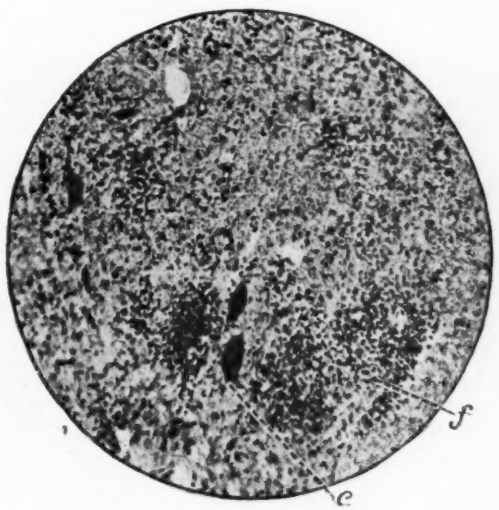
Lumbar segment of cord. Intense inflammatory reaction in posterior horns, as well as anterior. Destruction of ventral horn cells. Inflammatory perivascular exudation in meninges. A = microphotograph, Fig. 4. (Edinger projection × 5.)

FIG. 4.



Microphotograph of part of ventral horn of lumbar segment (vide A, Fig. 3). Note absence of motor cells, and diffuse inflammatory exudation, with patches where this is very intense. *v* = Surviving but damaged ventral horn cell. *f* = Foci of acute inflammatory exudation.

FIG. 5.



Microphotograph of cells of Clarke's column showing intense inflammatory exudation in their vicinity (vide B, Fig. 2). *c* = Cells of Clarke's column. *f* = inflammatory exudation.

None of these features are, however, incompatible with a diagnosis of acute poliomyelitis. In cases of acute paralysis of this kind there are four possible conditions to consider, as Dr. E. Farquhar Buzzard pointed out in his Goulstonian lectures in 1907.[1] These are: (1) acute poliomyelitis; (2) Landry's paralysis; (3) acute toxic polyneuritis; and (4) acute

[1] THE LANCET, March 16th (p. 705) and 23rd (p. 785), 1907.

ascending myelitis. Is it possible to make a certain diagnosis between these conditions during life? Up to a certain point it is, but errors have been made in the past, and will no doubt be made again even by those who have had most experience of these particular forms of infective or toxic conditions of the central nervous system. Acute ascending myelitis is probably the easiest to recognise with certainty, owing to the fact that there is most pronounced sensory loss which ascends *pari passu* with the paralysis, and that the sphincters are early affected. The following points are of some value in making a differential diagnosis, and for the sake of clearness they are arranged in tabular form. It must not be supposed, however, that exceptions do not occur to the brief descriptions set forth below.

Table in which are Particularized Some Points which are Helpful in Making a Differential Diagnosis.

—	Acute poliomyelitis.	Landry's paralysis.	Acute toxic polyneuritis.	Acute ascending myelitis.
1. Onset.	Sudden; progress rapid.	Sudden; progress less rapid.	Onset and progress more gradual.	Sudden.
2. Constitutional symptoms.	Often severe. Temperature 101–103° F.	Not so severe; little or no febrile disturbance.	Often no constitutional disturbance.	Severe; often great constitutional disturbance.
3. Muscular condition.	Flaccid palsy; as a rule some groups of muscles more affected than others. Rapid muscular wasting. Cranial nerves rarely affected.	Flaccid palsy; more uniform distribution. Little muscular atrophy. Cranial nerves rarely affected.	Peripheral muscles more affected than proximal groups. Cranial nerves not uncommonly affected.	Ascending paralysis involving successive segments of the spinal cord.
4. Sensory symptoms.	Severe pains in back and on passive movement common in early stages. No loss of cutaneous sensibility.	Severe pain rare; paræsthesiæ not uncommon. No loss of cutaneous sensibility.	Paræsthesiæ common; tenderness on pressure. Some degree of loss of cutaneous sensibility common.	Pain in back common. Marked degree of loss of cutaneous sensibility; ascending with paralysis.
5. Reflexes.	Deep reflexes abolished in affected muscles. May have extensor plantar in early stage.	Deep reflexes absent. No extensor response.	Absence of all reflexes.	Lost as disease progresses, but may be + in legs with extensor plantar.
6. Sphincters.	Unaffected.	Unaffected.	Unaffected.	Affected early.
7. Prognosis.	Good as to life, except in very severe cases.	Not so good as to life, but muscular recovery likely to be more complete.	Good as to life and recovery of muscular power.	Exceedingly bad.

FURTHER OBSERVATIONS ON THE TREATMENT OF HAY FEVER BY HYPODERMIC INOCULATIONS OF POLLEN VACCINE.

BY J. FREEMAN, M.D. OXON.

(*From the Laboratory of the Department for Therapeutic Inoculation, St. Mary's Hospital.*)

THIS paper is the sequel to Mr. L. Noon's paper on Hay Fever in THE LANCET of June 10th, 1911, in which was described research work for treatment by hypodermic inoculations of pollen toxin.

Previous Work.

Dunbar had described a simple ophthalmo-reaction as a diagnostic test for that susceptibility to pollen which constitutes hay fever; a watery extract of pollen of a certain strength dropped into the eyeball of a normal man produces no effect, but will cause a miniature attack of hay fever in susceptible persons. The test is quantitative in nature, and by noting the dilution of pollen which will just cause the eye to react it is possible to obtain some measure of the patient's susceptibility. Changes in susceptibility presumably have an inverse correlation with changes in immunity to the pollen toxin, and Noon applied this quantitative test to the study of changes in immunity produced by subcutaneous inoculations of pollen vaccine. In this way he demonstrated that *suitable* doses of pollen toxin increased the patient's immunity, while unsuitable doses either did not affect, or even decreased, this immunity; this brings the pollen inoculation work into line with the bacterial inoculation work of Wright and his school. These points established, Noon set to work to immunise hay fever patients during the off season in preparation for the season which we have just passed through. Unfortunately, circumstances compelled him to give up work last February, and the research passed into my hands; it is now possible to tabulate some laboratory data about these and subsequent inoculated hay fever cases, and also to give the clinical results of the treatment as disclosed by the past summer season.

Laboratory and Clinical Evidence in Table.

Explanation of table.—Adjoined is the tabulated list of the 20 cases treated on this system by hypodermic inoculations of pollen toxin; it is important to note that the list is not a collection of flattering "unsolicited testimonials," but gives an account of every case which had any systematic treatment, excluding only one or two people who were seen once and then lost sight of.

The first column gives the reference number of each case. The cases are arranged in the order in which they arrived for treatment; those who were already suffering from hay fever when they first presented themselves are marked with an asterisk.

The second column gives the dates of the beginning and end of treatment; these dates refer especially to the parallel figures in the next two columns.

The third column gives the state of pollen-immunity as judged by the ophthalmo-reaction at these dates. The unit of measurement here employed was explained fully by Noon in his paper last June; it is convenient shortly to redescribe it here. The quantitative measurement of the ophthalmo-reaction is made by noting the weakest dilution of pollen extract of which one drop, when dropped on the eyeball, will just produce a slight flushing of the inner canthus of the eye. The unit of measurement is a one-millionfold dilution of Phleum pratense pollen in water—which is spoken of as one unit of pollen, or shortly as 1 U P. Thus, a hundred-thousandfold dilution of pollen would equal 10 U.P., a thousandfold dilution would equal 1000 U.P., and so on.

The fourth column gives the hypodermic doses of pollen extract which were used at these two dates respectively; these doses are also given in terms of pollen units, 1 U.P. being 1 cubic centimetre of the millionfold extraction, or, to put it another way, the amount of pollen toxin extracted from one-millionth of a gramme of Phleum pratense pollen.

The fifth column gives a short summary of the fate of the patients during the hay fever season this year as reported by the patients or their friends.

In the sixth column I sum up my own impression of the case.

Laboratory evidence in table.—In studying this tabulated list of inoculated cases, the first point to be noted is the increased tolerance of pollen toxin which was produced by the inoculations in every case. This is shown in Column 3 by the ophthalmo-reaction which the patient gives at the beginning and end of treatment; and as the personal equation, the "functional error," of the observer enters very little into the results of this reaction, it is claimed that this change in the ophthalmo-reaction represents an undoubted change in the immunity of the patient.

Then, again, it is clear from Column 4 that the doses also were increased. Now, it was found by experiment that it

was impossible at the commencement of treatment to give much larger inoculations than those indicated in the list without producing symptoms of an overdose—symptoms clinically, and as noted in the laboratory by a falling off in the ophthalmo-reaction. If the dose *were* increased markedly, one might produce even in mid-winter such unpleasant things as swelling, pain, and urticaria at the site of inoculation, a general malaise, and all the nose and eye symptoms of a thorough attack of hay fever. Yet as immunisation progressed it was found by repeated ophthalmo-reactions that larger doses could be given with advantage, and though some of these were enormously greater than the initial dose, they were given without any clinical symptoms and without lowering the ophthalmo-reaction.

As denoted by the asterisks, most of the people at the end of the list were already suffering from hay fever when they came, but it was found that in these cases also there was an increase in immunity and an increase in the dose employed. The original scheme was one of prophylactic immunisation, and this was much more suitable for the preliminary research work because the effects of each dose could not be obscured by chance doses of pollen from the atmosphere; but clearly phylactic inoculations are of more use if only they will answer reasonably well. At first thought it might be argued that phylactic doses of pollen toxin will only add poison to an already poisoned patient, but this objection is no more valid in the treatment of hay fever than it is in the treatment of boils by staphylococcus vaccine; the answer is the same in both cases. Though it may or may not be true that at the seat of the disease the tissues are over-poisoned, yet the rest of the body may, under the stimulus of an inoculated vaccine, respond by an increased production of antibodies; this surmise is justified when it is found that such an inoculation *is* followed by a demonstrable increase in immunity.

It is claimed that this increase in immunity produced by pollen vaccine is in itself the best proof of the soundness of this line of treatment, whether prophylactic or phylactic. It is true that one does not know if this increase is sufficient for all purposes, but the change is certainly in the right direction, and must be doing good.

Case.	Month and year.	Resistance.	Dose.	Patient's opinion.	Writer's opinion.
1	July, 1910. May, 1911.	40 U.P. 5000 U.P.	4 U.P. 2000 U.P.	Extremely bad with hay fever for last four years. Inoculated persistently during the off season; stopped treatment in May. Tested well, but absolutely immune.	Eminently satisfactory.
2	July, 1910. (Did not continue.)	40 U.P.	2 U.P.	Refused treatment owing to article on anaphylaxie. Had hay fever worse than ever this year.	(Satisfactory.)
3	Sept., 1910. May, 1911.	20 U.P. 400 U.P.	4 U.P. 120 U.P.	Inoculated irregularly and also with two bacterial vaccines. Had hay fever, but probably not so bad as formerly, and was sooner over.	Disappointing.
4	Feb., 1911. May, ,,	20 U.P. 170 U.P.	6 U.P. 25 U.P.	Certainly much better, though not clear of hay fever.	Fairly satisfactory.
5	March, 1911. June, ,,	40 U.P. 400 U.P.	18 U.P. 20 U.P.	Has been practically free from hay fever this season, but has felt "on the verge of it" once or twice. Went in hay fields, motored, &c. (which was impossible formerly).	Satisfactory.
6	March, 1911. June, ,,	40 U.P. 1000 U.P.	12 U.P. 100 U.P.	"Have had no hay fever this year, except one attack lasting an hour after walking through a hay field, and no asthma. In former years had bad hay fever for at least six weeks and asthma at night."	Eminently satisfactory.
7	April, 1911. July, ,,	6 U.P. 1000 U.P.	2 U.P. 18 U.P.	"I think I may fairly say that though I had it pretty badly occasionally, it was not in so severe a form nor so easily excited. Susceptibility diminished, perhaps one-third. Effects less pronounced in the same proportion."	Inconclusive.
8	May, 1911. June, ,,	13 U.P. 170 U.P.	4 U.P. 20 U.P.	"Quite a marked improvement, if not an absolute cure."	Moderately satisfactory.
9	May, 1911. June, ,,	40 U.P. 500 U.P.	4 U.P. 25 U.P.	This case was handicapped by the inoculations being given rather irregularly. "The attacks were less violent on the whole, and certainly did not last as long."	,,
10*	May, 1911. June, ,,	130 U.P. 170 U.P.	4 U.P. 10 U.P.	Did not improve after several inoculations, and as he could with difficulty spare the time he decided to postpone the treatment for prophylaxis in the winter.	Failure.
11	May, 1911. July, ,,	13 U.P. 170 U.P.	1½ U.P. 10 U.P.	Had a little sneezing, but was clear of hay fever most of the time—probably not a very severe case. He reported, "the cure still continues to work marvellously."	Satisfactory.
12	May, 1911. June, ,,	40 U.P. —	4 U.P. 10 U.P.	"I do not want to boast, but I think I am quite done with the accursed thing for this year. There can be no sort of doubt, seeing the kind of season it has been, that I should have suffered, and that severely, if I had not had these inoculations."	,,
13*	May, 1911. June, ,,	5 U.P. 17 U.P.	1 U.P. 5 U.P.	"I *did* have a return of the hay fever after the cure" (i.e., three inoculations), "but only slight, and have not had it for over three weeks now."	,,
14*	May, 1911. July, ,,	170 U.P. 500 U.P.	10 U.P. 15 U.P.	"Since the inoculations began I have had practically no running at the eyes and nose, nor do my eyes get bloodshot."	Fairly satisfactory.
15	June, 1911. June, ,,	170 U.P. 500 U.P.	10 U.P. 300 U.P.	A Canadian who gets bad hay fever in August, but not earlier. Has had none this year up to date.	No test.
16*	June, 1911. June, ,,	17 U.P. 170 U.P.	1 U.P. 6 U.P.	"She is certain that the condition improved after the third, and she thinks it was better after the second dose. Afterwards she had very little return of symptoms till treatment was discontinued, when there was a slight return."	Satisfactory.
17*	June, 1911. July, ,,	5 U.P. 50 U.P.	1 U.P. 6 U.P.	Reported a distinct improvement after the second and third doses, and had no hay fever after the fourth.	,,
18*	June, 1911. July, ,,	170 U.P. 1700 U.P.	10 U.P. 50 U.P.	Reported himself very much better after the second dose, and was clear of hay fever from June 16th onwards.	,,
19*	June, 1911. June, ,,	5 U.P. 17 U.P.	1 U.P. 3 U.P.	"The hay fever inoculations, although I came to you having hay fever rather severely, did me an immense amount of good, and I intend next spring ..."	Fairly satisfactory.
20*	June, 1911. July, ,,	17 U.P. 150 U.P.	1 U.P. 5 U.P.	"First inoculation (given during severe attack) gave immunity for two days. Second gave complete immunity from Monday till Sunday. Third (rather stronger than before) brought on attack which lasted three days. I have perfect confidence in its power of giving immunity if the right strength is found."	Satisfactory.

Thus, Columns 3 and 4 both denote an increase in pollen immunity during treatment. This increase as here shown varies partly no doubt with the individual, but also with the thoroughness with which the inoculations were undertaken. It might be thought that both an increased ophthalmo-reaction and tolerance of an increased dose were tests of the same thing, and that therefore they must run parallel; this was not the case. At the commencement of treatment the dose could not with advantage be increased as rapidly as the increase of the ophthalmo-reaction, while at the end of treatment there was a tendency to a sticking-point in the ophthalmo-reaction, but the dose could gradually be made larger without producing symptoms either clinical or laboratory.

Clinical evidence in table.—In judging a system of treatment by "results" there are obvious sources of error which should be taken into account; and in criticising Column 5 let us give due weight to (1) the natural bias of the operator; (2) the bias of the patient; and (3) outside circumstances—i.e., luck, affecting the result. Every medical man so desires that his patient's condition shall be improved by his treatment that there is a constant tendency to detect such improvement in adventitious fluctuations of health. To avoid this danger most of the results were summarised for me either by the patients or their friends. On the patient's side there is also the desire for improvement, reinforced by the impression made on the mind by a rather novel system of treatment and a certain atmosphere of "science." As a set-off to such faith-healing, most of the patients had undergone several "cures" which they had been told were infallible, and they therefore submitted themselves to treatment in a critical, sceptical, or even hostile spirit. There is another point: any one who works at hay fever research will have a highly intelligent and critical material to work with—a very high proportion of the people in the above list have been accustomed by their position or employment to give discriminating judgments. Lastly, luck, or outside circumstances; was this year a better year for hay fever patients? Apparently not. The general, though not universal, opinion seems to be that the season was, on the contrary, more severe than usual—that it began and ended earlier. As some test of the season many of the patients were urged to select another hay fever case as similar as possible to themselves as a control case for observation; all these controls had much worse hay fever than the inoculated patient.

Considering all the cases generally, there seems little doubt that there has been a distinct amelioration of symptoms. This improvement took several forms; a greater freedom from attack, the attack not so bad as in former years, and the attack sooner over, the constitutional disturbance not so great, less asthma. The people who had already developed hay fever when they commenced treatment were, perhaps, the most generous in their comments, possibly because they had recently had a reminder of what hay fever was like.

Application of Treatment.

Diagnosis.—It remains to be considered how this treatment is to be turned to account prophylactically next winter and spring, and phylactically next summer. Whatever the treatment, the diagnosis is important; though an uncomplicated case will usually present no difficulty, yet it is sometimes convenient to have a test of susceptibility to pollen toxin, and this is almost a necessity when prophylactic inoculations are to be commenced in the off season. But there are many reputed cases of hay fever which are partly, and even wholly, caused by a bacterial infection; indeed, it seems probable that an attack of hay fever may be the starting point of a bacterial infection, or that a catarrh of the air passages may predispose to hay fever, and before treatment of any kind it is essential to disentangle these two factors. During the present research several so-called hay fever cases were excluded from treatment because the eyeball was unaffected by pollen toxin—one of these confessing to malingering, and the remainder being the victims of bacterial infections. A case treated by a colleague is a good illustration of the value of a diagnostic test. A lady reported to have hay fever had slightly inflamed eyes which streamed with clear tears; as she did not react to pollen toxin hay fever was excluded. The tears were found to be swarming with staphylococci, a vaccine was made, and in a short time the symptoms disappeared.

In the list of cases treated last season the first ophthalmo-reaction will be seen to vary between 5 U.P. and 170 U.P.; those who did not react to 5000 U.P. were said to give a negative test; there were no unaccountable cases—i.e., people whom subsequent events proved to have been negative giving a positive result, and *vice versâ*.

Initial dose.—Whether or no the help of such a test is required in fixing the diagnosis, it will at any rate be required in fixing the initial dose, should vaccination treatment be decided on. Noon suggested as a suitable initial dose one-third of a cubic centimetre of that dilution of pollen toxin which gives the ophthalmo-reaction. On this plan a man giving a diagnostic reaction of 6 U.P. would receive 2 U.P. hypodermically, and a man who reacted to 100 U.P. would receive 33 U.P. This seems to be about correct, or perhaps to err on the side of over-dosing, especially when hay fever is already developed. In this connexion it should be said that the cases in the tabulated list are not all to be taken as models, as experience was being gathered all the time. In addition, there were several deviations from the ideal course to suit special circumstances.

Subsequent doses.—The patient was, as a rule, re-inoculated every week or ten days: the larger doses were given after a longer interval, while the very small doses were repeated after three or four days. Those cases which were being treated phylactically usually finished treatment with the fifth or sixth dose, the prophylactic inoculations were naturally much more numerous, as an attempt was being made to produce as high an artificial immunity as possible.

All these doses were determined on with the assistance of ophthalmo-reactions. These were taken not only at the time of inoculating but also frequently between the doses; and it is urged that whenever this is possible it enables the operator to mark the success of his treatment, to detect mistakes, and, if necessary, to adapt his doses to the idiosyncrasies of his patient. Clearly that dose should be selected which will give the greatest increase to the immunity of the patient; if a dose or a series of doses fails to increase the patient's immunity as measured by the ophthalmo-reaction, then it is to be presumed that the dose is either too small to be efficient or so large as to be overdosing the patient, and this latter will be the case if the resistance of the patient is not only not increased but is even diminished after the doses. As a result of such tests it was generally found advisable not to increase the dose quite as rapidly as the increase in the ophthalmo-reaction, at any rate at first. Later in the process of immunisation the ophthalmo-reaction ceased to rise so quickly, and it was sometimes possible to regain the 1 : 3 ratio between the dose and the reaction. Lastly, in the case of very highly immunised patients—e.g., Case No. 1—the ophthalmo-reaction at last became stationary, but the dose was still increased.

It is, perhaps, possible by the ophthalmo-reaction to detect three stages in immunisation. In the first stage favourable doses are followed by an immediate rise in resistance, but should not be followed by a corresponding increase in the size of the next inoculation. In the second stage a larger dose is required, giving first a slight negative phase followed by a slow rise in immunity. In the final stage the eye reaction becomes stationary, but apparently the doses may be increased with advantage so long as there is no evidence, either laboratory or clinical, of an overdose.

Rule-of-thumb inoculations.—Owing to the nature of hay fever there is no danger to life and only temporary danger to health by inoculating "blindly"—i.e., without controlling the doses by ophthalmo-reactions; but it is thought that in order to make a diagnosis and to fix the first dose, at least one eye-testing will be necessary. As a rule-of-thumb, the second and third doses seemed to be usually half as much again as the first dose, while the fourth, fifth, and sixth are perhaps twice as much as the first, though in several cases the size of the dose was increased more rapidly than this.

Pollen supply.—With regard to the pollen extract necessary for testing the eye and for injecting as a vaccine, Dunbar's method of extraction is to be followed. The brief directions given by Noon in the previous paper should enable anyone, who has sufficient time and a laboratory, to construct his own pollen dilution. This will prove inconvenient to many, and it is proposed that the Inoculation Department of St. Mary's Hospital shall make arrangements to put these dilutions of pollen toxin on the market through Messrs. Parke, Davis, and Co., the proceeds to go to the upkeep of the department as in the case of their bacterial vaccines.

A final word as to the species of pollen employed. Noon selected that of timothy grass (Phleum pratense), because the pollen of this grass gave in his hands the strongest extract as tested on the eyes of the patients. This spring I tested various pollens as they matured, rushes, sedges, grasses, &c., but none gave so strong an extract as this timothy grass. The pollen of Alopecurus pratensis gave good results, but only possessed one-quarter the strength of Phleum pratense. The grasses and flowers dreaded by the hay-fever patients differ considerably in different cases, and the question arises—Is one kind of pollen more active in one case and another in another case? Though the question

cannot be regarded as settled, apparently this is not so. For one reason, the ratio between the strength of, say, a phleum extract and an alopecurus extract remains about the same with different patients—i.e., 4 : 1. Furthermore, a patient inoculated with alopecurus pollen vaccine is found to become immune to the phleum pollen extract as tested by the ophthalmo-reaction. Apparently, therefore, we need not select different types of pollen for treating different patients.

Devonshire-place, W.

SOME POINTS IN INJURIES TO THE ELBOW-JOINT.

BY R. LANE JOYNT, F.R.C.S. IREL.,
SURGEON TO THE MEATH HOSPITAL, DUBLIN.

INJURIES to the elbow-joint form a very large proportion of the cases submitted by surgeons to X ray examination, and of these a great number are cases of supracondylar fracture with displacement backwards of the bones of the forearm together with the small lower portion of the humerus. In an X ray examination of this injury (the supracondylar fracture) it is quite impossible at times to decide how much of the humerus is damaged; whether it is an epiphyseal separation or a true fracture above it. This difficulty is due, first, to the cartilaginous and transparent nature of the end of the humerus in children, and, secondly, to the extreme difficulty of keeping a child's upper arm steady during the X ray exposure, however short it may be. A displaced epiphysis may be replaced by the time the radiographer is asked to examine it, and if it goes back accurately into place he cannot tell in a recent injury whether it had been displaced or not. The difficulty of steadying a child's upper arm, and even the upper arm of adults, during an X ray exposure is well known to radiographers. Unsteadiness results in a blurred photographic plate and only gross injuries are decipherable. The lower fragment in any case is so small that the displacement is almost identical with that due to a true dislocation.

Simple dislocation of both bones backwards is a very rare injury in children, and any surgeon having to deal with a case presenting signs of backward displacement of the forearm in a child should suspect fracture of the humerus just above the condyles.

The readiness with which, in supracondylar fracture, the deformity can be reduced, only to recur at once when the limb is let go, and also the readiness with which the deformity recurs when the limb is actually put in splints, is well known to all who have handled such cases. It is therefore imperative, if the surgeon wants to protect himself against blame, as well as to furnish himself with the accurate knowledge that leads to successful treatment, that such cases should be radiographed some days after the limb is in the splints in order to make sure that the deformity has not recurred. To this end, splints should be used of wood or aluminium, or if of metal should be of the hoop iron pattern applied on the outside of the limb, so as to allow an X ray photograph to be taken without undoing the splint. If the bones are in good position no harm is done, and if not further attempts can be undertaken to correct the position of the bones.

Mr. Robert Jones of Liverpool has drawn the attention of the profession to the difficulty of treating these cases, and his paper read before the Surgical Section of the Royal Society of Medicine, and published in THE LANCET of Nov. 19th, 1910, p. 1479, is a masterpiece in the literature of joint injuries. I have adopted his method of treating these injuries in the first case by putting the limb up in a very flexed position, not an easy thing to accomplish with the ordinary splints, which do not go beyond a right angle. If splints are to be applied in the case of a child, cardboard cut like a V can be placed on the under side of the arm, or a thin strip of tin plate or light hoop iron or aluminium can be placed on the outer aspect of the bent limb, the metal being bent on the flat. Passive movement to "establish the right of way" should be begun early—that is, after seven days—and the direction "cause no pain" attended to during movement.

Fracture of the coronoid process of the ulna is, if it occurs at all, an extremely rare condition—that is, tearing off of the tip of the coronoid without fracture of the shaft of the bone. That is an injury to the bone similar in character to a fracture of the styloid or olecranon, and not associated with other injuries but dislocation.

My experience as an X rayist dates from 1896 (Roentgen's discovery was in 1895) and I am still actively engaged in this work, and up to the present I have never seen a case that to my mind presented unmistakeable signs of this injury in a "negative."

Mr. Jones points out the frequency with which, after apparently simple dislocation backwards of both ulna and radius, bony growths occur in the brachialis anticus muscle—a myositis ossificans. This condition I have met with on numerous occasions, all resulting from dislocation, and the subject was recently dealt with in the *Annals of Surgery* by an American writer.

The occurrence of bony growths in the muscle begins always near the coronoid and spreads upwards, and it seems to me that the muscle is torn near its attachment and does not lift off a plate of bone in the same way that the ligamentum patellæ does when it is torn from the tibia, or as the tendo Achillis does when separated from the os calcis.

Skiagrams show that in dislocation of both ulna and radius backwards at the elbow the tip of the coronoid process never gets beyond the lowermost point of the trochlear surface of the humerus. Even at that position the brachialis anticus must be tightly stretched over the forward projecting trochlear surface of the humerus and badly bruised. This damage is accentuated in many cases by ignorant attempts on the part of laymen to correct matters by vigorous pulling in a straight line, thereby stretching to bursting point the already over-extended brachialis anticus. I regret to say that many medical men resort to the same procedure in the belief that traction in a straight line can do no harm if not too vigorous, and will tire out the muscles and so facilitate reduction. It is quite immaterial whether force or not is used in this procedure—the damage is due to straightening the forearm, itself a powerful lever. By the act of dislocation the forearm has been put further away, in a downward direction, from the humerus than nature ever intended. The elbow now pivots on the top of the coronoid, and straightening the arm must elongate with irresistible power the already overstretched structures in front of the joint. I have always advocated, on this account, reduction of elbow dislocations while the joint is in the flexed position, and I have not found any special difficulty in this. By grasping the upper arm with interlocked fingers the pressure of both thumbs on the olecranon will frequently reduce the dislocation without other aid than that afforded by an anæsthetic. There is, of course, no objection to traction performed at a right angle—i.e., with elbow bent.

The coronoid process forms such a large mass of bone of a low truncated cone shape that *a priori* one would not expect it to be broken in the common accidents that cause dislocation. The teachings of the class-rooms of former days die hard, and attempts to classify injuries, to facilitate teaching, frequently led to undue importance being placed in students' minds on rare or suspected injuries. Recounts of these filled up the note-book or the examination paper and gave a rounded outline to a description of the fractures met with in any one bone. The ulna has two processes—"*argal*," both had to suffer—the styloid suffered in those days not from fracture but neglect, and damage to it in association with Colles's fracture was only recognised as of frequent occurrence on the advent of the Roentgen ray. Likewise the clavicle, divided into four parts for lecture purposes—each *had* to be fractured, and the portion external to the conoid and trapezoid ligaments was credited with getting broken with ridiculous frequency and amazing deformity. The X ray here has exonerated the bone at this place from anything except a very rare longitudinal split or dislocation from the acromion.

Dublin.

LITERARY INTELLIGENCE.—New editions of Sir Malcolm Morris's "Diseases of the Skin," Sir Arthur Whitelegge and Sir George Newman's "Hygiene and Public Health," and Sir Frederick Treves's "Surgical Applied Anatomy," revised by Professor A. Keith, are announced for publication by Messrs. Cassell in September, as well as "A Manual of Physics for Medical Students," by Mr. Hugh C. H. Candy, based upon the late Mr. Frederic Page's "Elements of Physics."

TRAUMATIC RUPTURE OF ABDOMINAL VISCERA.

REPORT OF THIRTY CASES.

BY A. RENDLE SHORT, M.D., B.S., B.SC. LOND., F.R.C.S. ENG.,
HONORARY SURGICAL REGISTRAR, BRISTOL ROYAL INFIRMARY; DEMONSTRATOR OF PHYSIOLOGY, UNIVERSITY OF BRISTOL.

Scope of report.—Included in the following list are all the cases of serious injury of the various abdominal organs that I have been able to collect from the records of the Bristol Royal Infirmary for the ten years 1900 to 1909. I have not added those brought in dead, except in one case of special interest. The total number of surgical in-patients during the same period was 21,143. I have endeavoured by correspondence to trace the after-history of the survivors, and have examined personally as many as could be brought to the infirmary.

Ruptured liver.—Eight cases, two recoveries. In three cases other viscera were injured at the same time (the pancreas, the kidney, and the spleen).

TABLE I.—*Ruptured Liver.*

No.	Sex and Age.	Year.	Operation.	Result.
1	M., 25.	1900	Five hours after injury. Abdomen full of blood. Rent large. 2½ yards of gauze packing stuffed into the tear.	Recovered. Five months later operated on for incisional hernia.
2	M., 30.	1902	Patient came up from Avonmouth. Extensive tear. Abdomen full of blood. Packed with gauze.	Died under 24 hours.
	M., 35.	,,	None. Kidney also ruptured.	,,
4	M., 7.	,,	None. Dying.	,,
5	F., 4.	1905	None. Dying. Spleen torn.	,,
6	M., 78.	,,	None. Dying.	Died in 10 minutes.
7	F., 14.	1906	Two days after injury. Small tear of liver; spots of fat necrosis everywhere. No tear of pancreas actually seen. Nothing done.	Recovered, after a severe attack of pneumonia. Seen and examined in February, 1910. Quite well since, except one attack of abdominal pain a year before, lasting one day.
8	M., 56.	1908	Two and a quarter hours after injury. Tear 4 inches long in liver. Not much hæmorrhage. Sutured with catgut.	Died two days after.

Five cases were admitted dying, and are of little interest as regards symptoms. In three others the symptoms were as follows. (The notes are sometimes scanty and imperfect).

TABLE II.—*Symptoms in Ruptured Liver.*

No.	Injury.	General condition.	Pulse and temperature.	Pain.	Abdomen.
1	Case of glass fell on him.	One hour later, "signs of internal hæmorrhage."	Pulse at first 84, then 62. Temperature subnormal.	Much.	Distended.
7	Fell on edge of pavement.	On admission, exceedingly pale.	Temperature, 99·2° F.	Some.	Moved on respiration; slight guarding.
	—	Two days later, worse; vomiting frequently.	Pulse 128.	More.	Muscles very hard and retracted. No shifting dulness.
8	Knocked down by motor-car.	Three-quarters of an hour later, walked into infirmary. Very collapsed, however.	Pulse "slow."	Yes.	Guarding, especially over right rectus.

Ruptured intestine.—There were six cases, and of these four patients recovered.

TABLE III.—*Ruptured Intestine.*

No.	Sex and age.	Year.	Operation.	Result.
1	M., 44.	1900	None. Fractured pelvis, ruptured cæcum. Dying.	Died under 24 hours.
2	M., 18.	1900	21 hours after injury. Jejunum severely torn. Sewn up.	Died six hours later. At necropsy a second smaller rent was found in jejunum.
3	M., 50.	1901	Six and a half hours after injury. Tear ½ inch long, probably of jejunum. Sewn up.	Recovered. Subsequent history unknown.
4	M., 22	1902	Four hours after injury. No leakage of fæces. Tuberculous peritonitis present. Sewn up.	Recovered. Seen in February, 1910. Slight incisional hernia. Quite well ever since and in full work.
5	M., 31	1904	Five hours after injury. Half circumference of jejunum torn, close to duodenum. Sewn up.	Recovered. Seen in February, 1910. Quite well ever since, but mentally weak.
6	M., 16	1906	Six hours after injury. Jejunum torn right across; mesentery torn; much blood. Sewn up end to end; mesentery sutured.	Recovered. Was seen six months later; quite well.

Some general remarks will be made later. A table of the recorded symptoms in five cases follows.

TABLE IV.—*Symptoms in Ruptured Intestine.*

No.	Injury.	General condition.	Pulse and temperature.	Pain.	Abdomen.
2	Kick by horse one hour before admission.	Much collapsed; improved under morphia; later got worse.	Pulse 30, temperature 96·8. Later, pulse 80.	Yes.	Hard, retracted, very tender.
3	Struck by handle of miner's pick.	On admission, two and a half hours later, anxious appearance; retching, but not vomiting.	Pulse 80, moderate volume, soft.	Great, in paroxysms.	Hard and retracted, very tender.
4	Cycled into shaft of cart.	Soon after accident, not collapsed; after an hour or two very anxious appearance; vomited three times.	Pulse 88, good; increased to 104 in an hour.	Much.	Intensely tender and very rigid. Rent in the muscles.
5	Pole of swing boat struck abdomen.	Immediately vomited "dark stuff." Walked to tramcar. On admission, very collapsed; abdominal facies. Vomited blood (℥ii.) three times. No improvement in four hours.	Pulse 62, strong, high tension. Temperature 96°. Four hours later, pulse 70, temperature 97°.	Much.	Did not move with respiration. Very tender and rigid; retracted.
6	Block of crane fell on him.	On admission, was concussed; not very collapsed. Four hours later, paler, collapsed.	Pulse 100. Temperature 97·8°. Four hours later, pulse 130.	Much.	Upper part moved on respiration. Very rigid and tender, especially in hypogastrium. Dulness over pubes and left Poupart's ligament.

Ruptured pancreas.—Two cases; one recovery. One of these has already been described under the heading of ruptured liver (Case 7, Table I.). The injury to the pancreas was not actually found, but was diagnosed on the evidence of fat necrosis, scattered throughout the subcutaneous, subperitoneal, and intra-abdominal adipose tissue. This case was operated on two days after the injury, but nothing was done. She nearly died from pneumonia a few days afterwards, but eventually recovered. I saw her in February,

1910, when she was perfectly well. There had been one attack of acute abdominal pain.

The other case, a boy, aged 12 years, was admitted in 1907, shortly after having been run into by some trucks. He was very collapsed, vomiting, and in considerable pain. The pulse was 99 and the temperature 97·4° F. The abdomen was very rigid and tender. Being watched for some hours, his condition became more alarming, though details are not given. Laparotomy was performed; the pancreas was found torn right across and there was much effusion of blood coming from the lesser sac. Two arteries were found and tied. The rent in the pancreas was plugged with gauze. He did well for a while, then developed pneumonia of both bases after one week. The edges of the wound appeared softened and digested. Eventually he became noisy and delirious, with irregular fever, and died from gangrene of the lung three weeks after the injury. At the necropsy there was a large subphrenic abscess under the left dome of the diaphragm communicating with the tear in the pancreas, and a good deal of tissue digestion.

These two cases are very characteristic of the types of clinical picture described in the literature as following injury of the pancreas. Pneumonia, fat necrosis, and subphrenic abscess are all frequent.

Ruptured spleen.—Three cases; all of them were fatal.

TABLE V.—*Ruptured Spleen.*

No.	Sex and age.	Year.	Operation.	Result.
1	M., 33	1903	Seven hours after injury. Great internal hæmorrhage; large rent of spleen. Splenectomy.	Died under 24 hours.
2	M., 24	1905	Seven or eight hours after injury. Huge internal hæmorrhage; spleen in two pieces. Splenectomy.	Died nine days after.
3	F., 4	1906	Admitted dying two days after injury. No operation.	Died under 24 hours. Rupture of liver and spleen found post-mortem.

TABLE VI.—*Symptoms in Ruptured Spleen.*

No.	Injury.	General condition.	Pulse and temperature.	Pain.	Abdomen.
1	Crushed by wheel of cart.	Condition on admission did not give rise to anxiety. No notes.	—	—	—
		Six hours later, pale and collapsed.	Very weak pulse.	Yes.	Dull on left side. Splash over præcordial area.
2	Fork of bicycle broke.	Immediately after injury seemed all right.	Pulse 90, good volume.	None.	No tenderness or rigidity.
		Six and a half hours later, very collapsed; intensely white.	Pulse 98, weak. Temperature 95°.	Yes.	Full, rigid, not tender.

Ruptured kidney.—Six cases; three recoveries. In one of the fatal cases the liver was also ruptured. In another the pelvis of the kidney was torn by the injury, and in the course of months following a saccular distension took place. The fatal result was brought about by the performance of a nephrectomy. A large number of patients whose only symptom was a transient hæmaturia have not been included in the list.

Ruptured bladder.—Five cases; only one recovered. In this case, the pelvis was also fractured. Four were intraperitoneal ruptures; in the other case the bladder was torn completely away from the urethra. In one case there was apparently no injury; the patient was in a drunken sleep, and was awakened by the pain of the rupture. No stricture and no ulceration of the bladder were found. This occurrence, though very unusual, is not unique.

TABLE VII.—*Ruptured Kidney.*

No.	Sex and age.	Year.	Condition and treatment.	Result.
1	M., 21	1900	Admitted in October, 1899, for "? ruptured bladder," after fall from ladder; no operation.	—
			Admitted later for recurring lump in abdomen associated with hæmaturia, which proved to be a saccular bulging of the pelvis of the right kidney. Drained from in front. Finally, lumbar nephrectomy was performed. The kidney was reduced to a mere shell.	Death from shock, eight months after injury.
2	M., 20	1901	Pain, fever, vomiting, hæmaturia, tender mass felt in left loin, diagnosed as perirenal hæmatoma. Treatment: rest.	Cured. Seen and examined in February, 1910. Quite well ever since. Successful cricketer.
3	M., 16	,,	Collapse, vomiting, mass in left loin diagnosed as perirenal hæmatoma; hæmaturia. Treatment: rest.	Cured. Wrote in February, 1910, to say that he has been perfectly well since.
4	M., 35	1902	Ruptured liver and kidney. Dying. No operation.	Died under 24 hours.
5	F., 25	1906	Fell down four days before admission. Admitted collapsed, with large swelling in loin. Operation: perirenal hæmatoma found; kidney ruptured and full of blood. Nephrectomy.	,, ,,
6	M., 51	1908	Hæmaturia. Swelling in loin. Treatment: rest.	Cured. Seen in February, 1910. Perfectly well ever since.

TABLE VIII.—*Ruptured Bladder.*

No.	Sex and age.	Year.	Operation.	Result.
1	F., 4	1901.	On the evening after the day of injury. Abdomen opened above pubes; bladder found completely torn away from urethra; urine in peritoneal cavity. Fractured pelvis. Bladder opened and drained above pubes; catheter put in.	Died next day.
2	M., 24	1902	One week after injury. Abdomen opened; at least 13 pints of urinous fluid in peritoneum. Intraperitoneal rupture of bladder. Rent sewn up; catheter passed and left in.	Died two days later.
3	M., 38	1905	Several hours after probable time of rupture; the subcutaneous tissues in front of the bladder were explored on the theory of extraperitoneal rupture and none found. Seven or eight hours later abdomen opened; intraperitoneal rent found and sewn up; catheter tied in.	Died immediately afterwards.
4	M., 75	1906	About six hours after injury. Abdomen opened; intraperitoneal rent of bladder found and sewn up; catheter tied in.	Died under 24 hours.
5	M., 31	1909	Ten hours after injury. Abdomen opened; intraperitoneal rupture of bladder; torn by splinter of a fractured pelvis. Rent sewn up; catheter tied in.	Recovered. Seen in January, 1910. Some pain over the site of fracture. Mild cystitis; no other bladder trouble.

A table of the symptoms in each of the five cases is appended. Some general remarks are made in the summary at the end.

TABLE IX.—*Symptoms in Ruptured Bladder.*

No.	Injury.	General condition.	Pulse and temperature.	Abdomen.	Bladder.
1	Run over by train.	Seen soon after; sent home; no pain; facies normal.	Pulse quiet.	Soft.	Could not pass urine that night.
		Next day, in out-patient-room, was pale and anxious-looking, in great pain; admitted. Symptoms increased later in the day; vomiting.	Pulse 148, small.	Distended, rigid; dull in flanks.	No urine passed. Only blood withdrawn by catheter. Fluid injected did not all return.
2	Fell into ditch when drunk, one week before admission.	On admission, little or no pain. Did not appear very ill.	Pulse 88, small, regular. Temperature 98°.	Tense, greatly distended, not rigid; dull in flanks. Œdema of skin.	Had been passing urine sometimes and using catheter sometimes.
3	Bladder ruptured whilst asleep, drunk. No obstruction.	Admitted some hours after. Looked ill; much pain.	Pulse 120, temperature 98°.	Distended; very tender; rigid in hypogastrium. Effusion into abdominal wall.	Only blood by catheter. Thought to be surgical emphysema of rectum.
4	Ashes fell on him.	Admitted soon after. Very collapsed; great pain.	Pulse not palpable.	Tender in hypogastrium. Rigid.	(No notes.)
5	Immense stone fell against him, and pinned him down.	(No notes.) Admitted eight hours after.	—	Distended, tender, bruised.	(No notes.)

Ruptured inferior vena cava.—A boy, aged 10 years, was brought in dead in 1906, having been knocked down by a vehicle in the street. Death was almost instantaneous. At the necropsy there was a rent one-third of an inch long, obliquely placed, in the inferior vena cava just below the pancreas. There was a little blood (3 oz.) in the peritoneal cavity. This was the sole injury. The condition must be very rare, if not unique.

Ruptured mesenteric or omental vessels.—A boy, aged 12 years, was admitted in 1908, presenting symptoms of internal hæmorrhage after a fall on the abdomen. An operation was performed and a blood effusion found, but no source could be discovered. He got well.

General Conclusions.

These remarks may be classified under the headings of Diagnosis and Prognosis.

Diagnosis.—The great outstanding lesson is to enforce the need for cautious and patient observation after any abdominal injury, especially if it is of such a nature that the blow might be unexpected or severe. Above all, no favourable opinion must be based solely or principally on the rate or character of the pulse. Excluding cases admitted moribund, out of ten patients with ruptured liver, intestine, pancreas, or spleen, the pulse-rate when they were first seen was in one case 100, in another 99, and in seven about normal. In one it was only 30. *In every case of rupture of any abdominal viscus in which the pulse-rate on admission exceeded 100, the patient died within 24 hours.* It is often mentioned that the volume and tension were good. The text-books usually state that the pulse-rate will rise if there is a serious injury. This was true in at least six cases, but in one of ruptured liver it fell from 84 to 62.

The temperature seems to be of more value. It is only recorded in the notes nine times; in five of these it was markedly subnormal. Pallor or anxious appearance is often remarked upon. Abdominal pain and rigidity were almost constant, except in the tragic and deceptive cases shortly to be narrated. Vomiting was not usual. Only one patient vomited blood. The diagnosis was usually made by observing that after some hours the appearance, the abdominal condition, and the pulse did not improve; in many there was a decided change for the worse.

Several cases illustrate well the extraordinary way in which the patient may come up with few or no alarming symptoms after a mortal injury. A girl (Case 1, Table VIII.) whose bladder was torn completely away from the urethra, and whose pelvis was fractured, was seen soon after the injury in the casualty room; the appearance was normal, the pulse slow and of good volume, and the abdomen soft. It was not until she came up with an out-patient note on the following day that a diagnosis was made.

A man (Case 2, Table VIII.) fell into a ditch whilst intoxicated and ruptured his bladder into the peritoneum. He did not come to the infirmary for a week. During that time he saw his medical man, who passed a catheter several times; often he could pass urine himself. He was up and about part of the time. On admission his abdomen was immensely distended; at the operation at least 13 pints of urinous fluid was evacuated, and 12 sutures were needed to sew up the rent in the bladder.

The report further illustrates the deadly nature of injury to the spleen, on account of the frequency with which it passes unrecognised. Both the cases recorded were, when first seen, apparently little the worse for their hurt, though about six hours later both were in a dying condition. It cannot be too thoroughly impressed upon the new generation of medical men that all cases of unexpected or possibly severe blows on the abdomen must be watched for several hours, however good the pulse may be, before they can be regarded as safe.

Prognosis.—It will be observed that there is an excellent series of recoveries after ruptures of the intestine, and several after severe injuries of the kidney, but that only one here and there is saved after other abdominal injuries. It is gratifying to find, however, that those who survive the immediate trouble seem to do well afterwards. Two got small incisional hernias. Apart from these the writer has seen or heard from one case of ruptured liver and pancreas, two cases of ruptured intestines, three of severe injuries of the kidney, and one of ruptured bladder. Each gave a gratifying account of subsequent progress, and all were as well and strong as ever they were, with the exception of the last. An exception must be made in regard to ruptures of the pancreas. Both cases got pneumonia, and one died several weeks later of a subphrenic abscess and gangrene of the lung.

Clifton, Bristol.

CHRONIC OBSTRUCTION OF THE BOWEL IN A HYDROCEPHALIC IMBECILE; RESULTS AT POST-MORTEM EXAMINATION.

BY A. L. E. F. COLEMAN, M.B., CH.B. ABERD.,

AND

H. D. EVERINGTON, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

A MAN, aged 28 years, was admitted into the Croydon General Hospital, under the care of Dr. John Wayte (by whose kind permission these notes are published), on May 11th, 1909, with symptoms of obstruction. The history of the case showed that the patient, an imbecile, had always had difficulty in getting his bowels to move. The difficulty was becoming greater and he became "stouter and stouter." Pain began to be complained of, but medical advice was not sought until the day of his admission into hospital. He was hydrocephalic and the legs were paralysed, but he had been able to crawl about and had seemed fairly happy.

On examination the abdomen was found to be enormously distended. It was resonant in places, but for the most part was dull, and a hard mass 8 or 9 inches broad could be felt in the middle line. The patient complained but little of pain in spite of the obviously serious condition. Enemata of turpentine and gruel were begun, and after three injections a small motion was passed. Castor oil in small repeated doses was administered, but neither of these measures availed,

and the patient gradually sank and died at 9.40 A.M. on the 13th.

Necropsy.—The abdomen measured 52 inches at its greatest circumference, and on being incised the tissues began to tear owing to the internal pressure, showing that the muscular walls had not entirely accommodated themselves to the swelling, and that the condition was therefore to some extent acute. On opening the peritoneum a hollow viscus at once protruded and had to be punctured to prevent its bursting. The abdomen was then completely laid open and the front wall of the chest was removed. What appeared to be an enormous stomach was then seen, extending from the level of the third rib above down into the pelvis. The heart was not to be seen, and the lungs could just be detected at the sides; the diaphragm was completely displaced. The viscus mentioned proved to be an immensely dilated sigmoid flexure and rectum, terminating on the one hand (A ii) in the lower end of the descending colon, and on the other (A i) at the anus. The length of this loop of intestine was 45 inches and its greatest circumference 23 inches. On laying it open it was found to contain nearly 3½ gallons of fæces of a clay-like consistence and dark brown colour. The walls of the sac were very thick and the vessels exceedingly large, as may be seen from the illustration. The rest of the large bowe

Reproduction of a photograph showing immensely distended sigmoid flexure and rectum.

was somewhat distended with gas and measured at its greatest circumference 17 inches, but beyond this increase in size it was normal. The small intestine and stomach appeared to be normal. The bladder was entirely covered by peritoneum and was pedunculated, as appears in the illustration in the right groin at B. The chief point with regard to the other organs was the small size of the lungs—13 oz. each—and these were compressed into a small space at the apex of each side of the thoracic cavity. The skull measured 26 inches in the occipito-frontal diameter; the fontanelles were closed, but the bone was everywhere thin. The ventricles of the brain contained over a pint of clear fluid.

This case well illustrates how greatly the wall of the large bowel may be stretched and its lumen increased in chronic constipation, and to what extent the abdominal parietes will accomodate themselves to the altered conditions. That such a condition could arise without the greatest distress and pain can only be accounted for by the fact that the patient was an imbecile.

PRESENTATION TO A MEDICAL PRACTITIONER.—At the town-hall, Ottery St. Mary (Devon), on August 21st, Sir John Kennaway, on behalf of a large number of subscribers, presented Mr. Felix P. Bartlett, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Lond., with a silver salver as a mark of respect and esteem on the occasion of his leaving Ottery St. Mary for Australia. Mrs. Bartlett received a rose-bowl.

THE OPERATIVE TREATMENT OF RETROVERSION AND PROLAPSE OF THE UTERUS.

BY ALBERT E. MORISON, F.R.C.S. EDIN.,
SENIOR SURGEON, HARTLEPOOLS HOSPITAL; SENIOR ASSISTANT SURGEON, SUNDERLAND INFIRMARY.

PROLAPSE of the uterus occurs from the following causes: (1) Tearing or stretching of the posterior segment of the pelvic floor, which consists chiefly of the levator ani and the deep pelvic fascia; (2) increased intra-abdominal tension and alteration in the line of projection of the intra-abdominal pressure; and (3) stretching of the parts forming the anterior segment of the pelvic floor. In the early stages of prolapse one or all of these causes may be at work, in the later processes all are involved.

A short description of the normal conditions of the pelvic cavity will help in understanding this. In the natural condition of the pelvic cavity the uterus in the erect position of the body, and with the bladder entirely or almost empty, lies somewhat anteflexed upon the bladder, and when pressure is put upon the uterus by any increase of intra-abdominal tension the direction in which it is exerted is at a right angle forwards and downwards and tends to still further antevert the uterus. When the bladder is full the uterus is pushed backwards, and any increase in the intra-abdominal pressure tends to aggravate the condition. In this position a stretching of the anterior pelvic segment takes place, and the backward pressure may become such that a permanent retroversion or retroflexion is produced. These two factors of themselves will, however, not cause prolapse unless the third factor be weakened or destroyed—viz., the posterior segment of the pelvic floor. This, as we have seen, consists of the levator ani and the fascial planes constituting the perineal body. Under increased intra-abdominal pressure this body contracts to oppose the effect of the contraction of the abdominal muscles and closes the outlets of the pelvis, the rectum, and vagina during this period of strain. When the perineal body is torn or stretched not only does this counteracting force disappear, but the angle at which the force from above is directed is changed. Instead of being downwards and forwards, it now becomes downwards and partially backwards. When the force acts in this manner on a relaxed posterior segment, and especially on an enlarged and flabby uterus such as is present after parturition, first retroversion, then complete descent of the pelvic contents, takes place.

The sequence of events is, then, as follows:—A torn perineum with stretching of the utero-sacral ligaments and vesico-vaginal septum, together with a large, flabby, sub-involuted uterus, allows any increased intra-abdominal strain, such as lifting, &c., to produce a prolapse more or less complete.

Any operation, therefore, undertaken to cure this condition must aim at three things: (1) Restoration of the perineal body; (2) replacement of the uterus to its normal position, so that the intra-abdominal pressure is again exerted in the normal direction—viz., downwards and forwards; and (3) improvement of the condition of the anterior uterine segment.

As many of these cases of procidentia occur in women who have not passed the menopause, a further important desideratum is that the possibility of conception shall not be interfered with, and in the event of pregnancy that the patient shall not incur any special risks during parturition. All operations which have as their result the fixing of the uterus to the anterior abdominal wall are to be condemned. Not only may this suspension interfere with the natural course of pregnancy, but post-partum hæmorrhage is said commonly to follow labour when the uterus is thus fixed. Moreover, the adhesions formed are apt to stretch and to produce a band between the uterus and the anterior abdominal wall which may be a source of danger as the incarceration of a loop of intestine under it can occur.

The operation I am about to describe obviates, I think, all these disadvantages, and is easy to perform. The time occupied in the whole operation need not exceed half an hour and no special instruments are required. Since my first operation in June, 1909, I have operated on 25 cases varying in age from 20 to 73 years, and all have

been successful both as to the operative result and subsequently. The preparation of the patient for the operation is similar to that for any pelvic operation by the combined abdominal and perineal route. The patient stays in bed for at least two days before the operation. Her vagina is douched twice a day with 1 in 2000 sublimate lotion; a dose (℥i.) of castor oil is given two nights before the operation; on the evening preceding the day of operation a hot bath; and on the operation morning a simple enema is administered. Two hours before the time fixed for operation the abdomen and vulva are shaved dry and painted with tincture of iodine (B.P.) and the parts are covered with a sterile towel. The patient is first nearly anæsthetised with chloroform, and ether by the open method is given during the remainder of the operation. The patient is placed in the lithotomy position for perineorrhaphy and the abdomen, vulva, and vagina are again painted with tincture of iodine. I invariably do the flap-splitting operation devised by Lawson Tait, making the alteration in the technique of stitching the raw surfaces together in layers with buried catgut sutures. A Pezzer retaining catheter is inserted into the bladder and remains for a week; the vagina is plugged with a gauze tampon powdered with boric acid, and the patient is then transferred to the Trendelenburg posture. Surgeon and assistants meanwhile put on fresh sterile gloves before undertaking the abdominal part of the operation. The parietal incision is made in the middle line, the lower end reaching the pubes below. After opening the peritoneum the pelvic contents are examined; the uterus is grasped with forceps and pulled upwards. The intestines are then packed off afterwards with gauze mops. Each round ligament is seized with clip forceps about its centre. Another pair of forceps is passed through each broad ligament close to the uterus and 1 to 2 inches below its superior margin, care being taken to avoid the veins of the pampiniform plexus. The round ligaments are now caught in the forceps, passed through the broad ligaments, and drawn through the latter until their loops meet behind the uterus. A strong silk suture is passed through them, including the back of the uterus, and is tied. In severe cases of prolapse a second suture is inserted in the same way an inch lower down to obtain a broader sling from which the uterus hangs. The position of the uterus is now entirely changed. It is raised high up in the pelvis, anteverted, and lying on the bladder. The broad ligaments are tightened up by the passage of the round ligaments through them; the utero-sacral ligaments are also drawn upwards, and both anterior and posterior vaginal walls are tightened. As soon as the patient is released from the Trendelenburg position the intestines fall down into Douglas's pouch, and this should be seen before closing the abdomen. The abdominal wall is sutured in tiers, the wound is painted with iodine and dressed with aseptic gauze and wood-wool wadding.

After-treatment.—The vaginal tampon is removed in two days, after which a douche of 1 in 5000 sublimate lotion is given night and morning. A simple enema is administered every day. The Pezzer catheter remains in the bladder for a week and urine is allowed to escape at six-hourly intervals by removing the plug in the end of the catheter. During this time large quantities of distilled water (half a gallon per day) should be drunk by the patient to prevent the deposit of salts on the catheter from the urine. No restriction is made as to the position the patient may select as she lies in bed, where she remains for three weeks.

The after-history in all of the cases on which I have performed this operation is excellent. No bladder trouble such as might be expected is complained of, the patients being able to retain their urine for as long as eight hours.

One patient (Case 4) returned complaining of "something coming down," but examination showed the uterus to be high up in good position. There was, however, a slight prolapse of the anterior vaginal wall, but the bladder was not affected, and this was rectified by removing an elliptical portion of the mucous membrane. In this case the prolapse was of many years' standing, and the vaginal mucous membrane was very much thickened from exposure and friction on the patient's thighs.

Appended herewith is a list of all the cases I have operated on up to the end of last year. As none of these patients have become pregnant since the operation I have had no opportunity of recording the behaviour of the uterus during this period and subsequently. It is not too much to hope that the round and broad ligaments with their muscular and elastic tissue will accommodate themselves to the growing requirements of the enlarging uterus and return to their normal condition when it has emptied itself, as we know these ligaments do in the normal state.

TABLE I.—*Cases of Retroversion of the Uterus for which Suspension only was performed.*

Case.	Age.	Date of operation.	History.
1	42	6/1/10	No children. Dysmenorrhœa. "Bearing-down" pains. Uterus retroverted and enlarged.
2	29	5/4/10	Ill for nine months. Three children. Youngest 3 years. Metrorrhagia and dysmenorrhœa. Uterus retroverted and enlarged.
3	20	16/8/10	"Pain and falling of the womb." No children. Frequent micturition. Uterus retroverted and pushed down. Cystic swelling in Douglas's pouch size of goose's egg. Right cystic ovary removed. Uterus suspended.
4	37	18/11/10	Three children, youngest 6. Metrorrhagia and menorrhagia. Uterus retroverted and enlarged (4½ in.).
5	39	21/11/10	No children. Menorrhagia and dysmenorrhœa. Uterus retroverted and enlarged.
6	24	—	—

TABLE II.—*Cases of Prolapse of the Uterus for which Suspension and Perineorrhaphy were performed.*

Case.	Age.	Date of operation.	History.
1	35	30/6/09	Frequency of micturition for eight years. Complete prolapse for six years. Four children, youngest 3 years. Perineum torn to rectum.
2	35	23/7/09	Complete prolapse for two years. Four children, youngest 4 years. Perineum ruptured.
3	38	28/7/09	Complete prolapse since birth of last child two years ago. Perineum torn.
4	42	31/8/09	Complete prolapse for 14 years. Cervix very elongated. Four children, youngest 9. Perineum torn. Subsequent colporrhaphy for prolapse of vaginal mucosa.
5	43	11/11/09	Slight prolapse and cystocele. Four children, youngest 9. "Bearing down" and frequency of micturition. Perineum torn.
6	35	10/1/10	Slight prolapse and retroversion. Menorrhagia. Frequent desire to micturate. Three children, youngest 18 months. Perineum torn.
7	67	23/1/10	Complete prolapse for 20 years. Uterus constantly outside vulva.
8	35	24/2/10	Two children, 6 and 1¾ years. Perineum torn at first confinement. Uterus prolapsed slightly after this; completely since last child was born.
9	42	19/4/10	Seven children, youngest 5. Complete prolapse for seven years. Perineum torn.
10	42	11/5/10	Six children, youngest 7. Complete prolapse for some years. Perineum torn into rectum.
11	28	1/6/10	Three children, youngest 2. Has had "bearing down" since birth of last child. Complete prolapse. Perineum torn.
12	73	16/6/10	Ten children, youngest 32. Complete prolapse for many years. Patient unable to go about.
13	32	24/6/10	Complete prolapse since birth of last child eight years ago. Frequency of micturition. Perineum torn.
14	56	26/8/10	Six children, last 18 years ago. Constant desire to micturate. Complete prolapse for several years. Perineum torn.
15	39	28/8/10	Six children, youngest 5. Complete prolapse for three years. Perineum torn.
16	24	24/9/10	One child, 18 months ago. Large cystic swelling in Douglas's pouch. Uterus retroverted and prolapsed, but not outside vagina. Small ovarian cyst removed from left side. Uterus suspended. Perineorrhaphy.
17	38	28/9/10	Ten children, last seven weeks ago. Uterus prolapsed for four years. Perineum badly ruptured.
18	30	3/10/10	Three children, youngest 11 months. "Falling of womb" for two years. Perineum torn at first confinement.
19	26	2/11/10	Three children, youngest 2. Has had a "bearing down" since birth of first child. Complete prolapse. Perineum torn.

Sunderland.

PHTHISIS IN WALES.

BY HUGH R. JONES, M.A., M.D. CANTAB., B.SC. LOND., D.P.H.

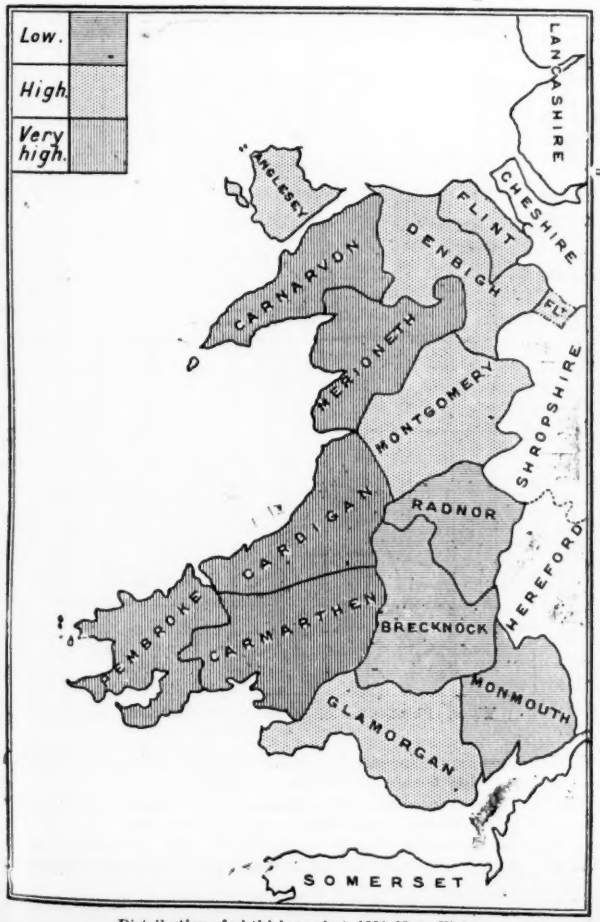
IN the Registrar-General's report for 1909, corrected death-rates are published for the quinquennium 1905–09, for 18 counties in which the highest mortality from phthisis was recorded. (Table I.) Ten of the 18 counties were Welsh, and in six of them the mortality was higher than in any English county. Yet the death-rate from phthisis in Wales has fallen fully 37 per cent. during the last 25 years—from 2·04 per 1000 in 1881–1890 to 1·28 in 1900–09, while that in England and Wales fell 33 per cent.—from 1·77 in 1881–1890 to 1·19 in 1900–09.[1]

TABLE I.—*Corrected Phthisis Death-rates per Million.*

Phthisis 1905–09.	Persons	Males	Females
England and Wales	1125	1325	938
England, excluding Monmouthshire	1120	1333	920
Wales, including Monmouthshire...	1213	1195	1229
Cardiganshire...	2237	2320	2159
Carmarthenshire	1525	1409	1633
Merionethshire	1512	1567	1462
Carnarvonshire	1501	1588	1420
Pembrokeshire	1393	1383	1401
Anglesey	1356	1167	1534
Montgomeryshire	1217	1316	1125
Flintshire...	1151	1284	1026
Brecknockshire	1148	1031	1257
Glamorganshire	1134	1122	1145

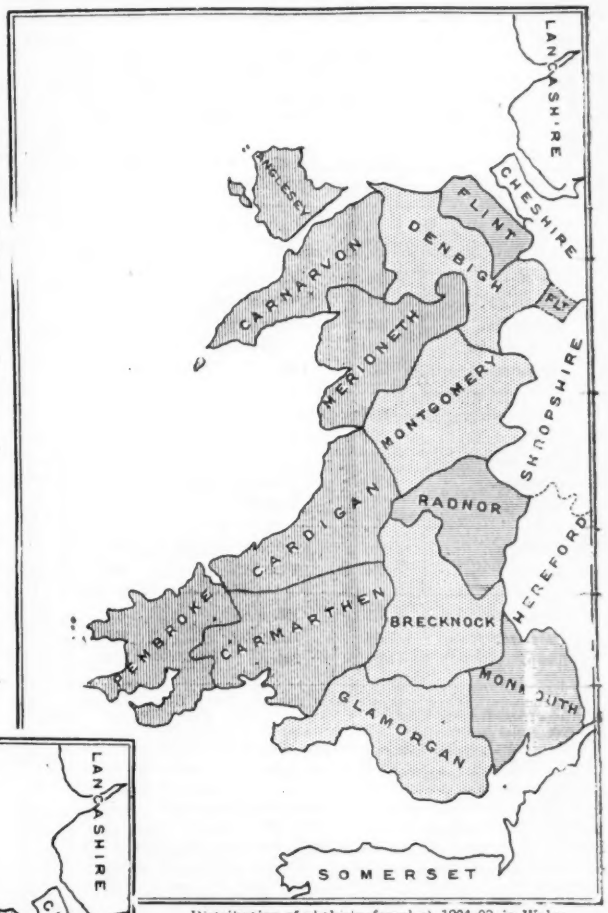
[1] Crude death-rates are quoted unless otherwise stated.

FIG. 1.



Distribution of phthisis (males), 1904-08, in Wales.

FIG. 2.



Distribution of phthisis (females), 1904–08, in Wales.

The mortality of males in Wales is, however, less than that in the whole country—1·30 per 1000 compared with 1·40 for the decennium 1900–09—notwithstanding that it was in excess in 5 out of the 12 Welsh counties. It is intermediate between the mortality in the urban and rural counties. It must be remembered that there are no unhealthy industries in Wales, and that two of the chief occupations—viz., mining and agriculture—are favourable to a low mortality from phthisis, while the mortality in a third—stone and slate quarrying—though twice as high as in the others, is not much above the average, the comparative mortality figures being for all occupied males, 175; coal-miners (South Wales and Monmouthshire), 93; stone and slate quarries, 186; and agriculturists, 79. The recorded mortality of males cannot therefore be regarded as satisfactory.

On the other hand, the mortality of females is very much higher than in the whole country (being 1·27 per 1000, compared with 0·99), with the result that the phthisis mortality of both sexes in Wales exceeds that for England and Wales by 0·09 per 1000. The female mortality in Wales is lower than the male mortality only by 2·3 per cent., while for the whole country it is lower by more than 29 per cent.

If the statistics of South and North Wales be compared it is seen that while the mortality of

TABLE II.—*Crude Phthisis Death-rates per Million 1904–08.*

—	Males.	Females.
England and Wales	1362	963
South Wales	1215	1260
North Wales	1407	1261

females is nearly the same in both divisions, the male mortality is appreciably higher in North Wales than in South Wales. (Table II.)

The counties with the highest mortality—both male and female—are situated on the west littoral, those with the lowest mortality on the English border, and the mortality in the intervening counties is intermediate. (Table III., Figs. 1 and 2.)

TABLE III.—*Welsh Counties—Crude Phthisis Death-rates per Million, 1904–08.*

Males.		Females.	
Cardigan.	2304	Cardigan.	2134
Merioneth.	1762	Carmarthen.	1613
Carnarvon.	1663	Carnarvon.	1524
Carmarthen.	1434	Anglesey.	1433
Pembroke.	1358	Merioneth.	1428
		Pembroke.	1346
Montgomery.	1296		
Flint.	1238	Brecknock.	1205
Denbigh.	1167	Glamorgan.	1128
Anglesey.	1164	Montgomery.	1087
Glamorgan.	1121	Denbigh.	1038
Brecknock.	1008	Radnor.	974
Radnor.	616	Flint.	960
Monmouth.	948	Monmouth.	929
Hereford.	1048	Hereford.	913
Salop.	1076	Salop.	863

Reference to the maps shows how the mortality from phthisis increases from East to West.

Coincidently with the fall in the death-rate from phthisis in England and Wales, the age of maximum mortality from phthisis has been postponed both in males and in females. In 1851–60 the maximum male mortality occurred between the ages of 20 and 25 years, in 1861–70 between the ages of 35 and 45 years, and in 1891–1900 between the ages of 45 and 55 years. The maximum mortality among females in 1861–90 was between the ages of 25 and 35 years, and in 1891–1900 between the ages of 35 and 45 years.

In Wales a sustained high mortality of males between the ages of 20 and 65 years was recorded in the three decennia 1881–90, 1891–1900, and 1900–09 (Table IV., Figs. 3 and 4);

TABLE IV.—*Wales—Phthisis Mortality per 100,000 in Three Decennia.*

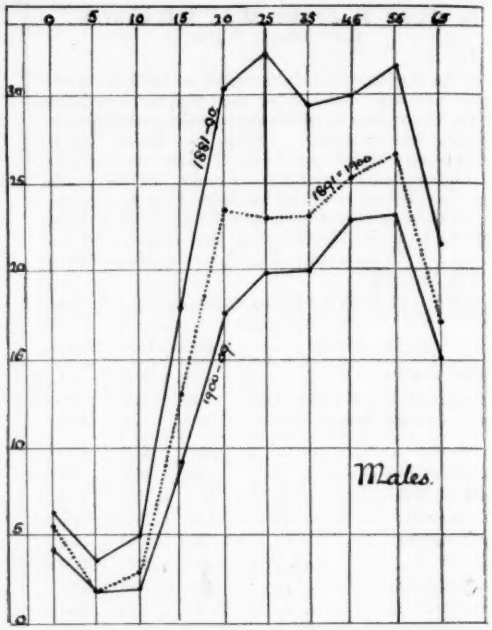
Age-period.	Males.			Females.			Persons.		
	1881-90.	1891-1900.	1900-09.	1881-90.	1891-1900.	1900-09.	1881-90.	1891-1900.	1900-09.
0—	63	56	42	61	46	34	62	49	38
5—	36	17	17	47	28	21	41	22	19
10—	49	29	20	110	72	57	80	50	39
15—	178	130	93	277	194	143	226	160	118
20—	303	234	174	335	240	181	319	237	177
25—	323	230	197	372	267	220	346	248	208
35—	293	231	198	329	253	203	311	242	201
45—	297	253	227	237	185	160	266	219	194
55—	316	265	231	198	159	129	255	208	178
65—	214	169	151	115	96	82	160	128	113
All ages ...	196	153	130	210	157	127	204	156	128

The 1900–09 figures supplied by the Registrar-General.

but a similar postponement of the age of maximum mortality is observed—from the age-period 25–35 in 1881–90 to the 55–65 period in the last two decennia. Among females the mortality rose to a maximum at the age-period 25–35 in the three decennia, but the duration of the period of very high mortality is shorter than among males.

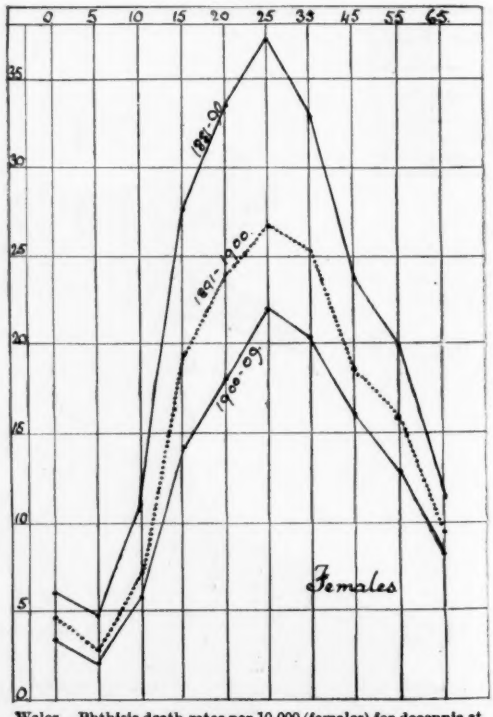
For comparison, the death-rates of males and females (North Wales, South Wales, and England and Wales) have been charted for the decennium 1891–1900. (Table V., Figs. 5 and 6.) Except for the earlier age of maximum mortality in the

FIG. 3.



Wales. Phthisis death-rates per 10,000 (males) for decennia at age-periods.

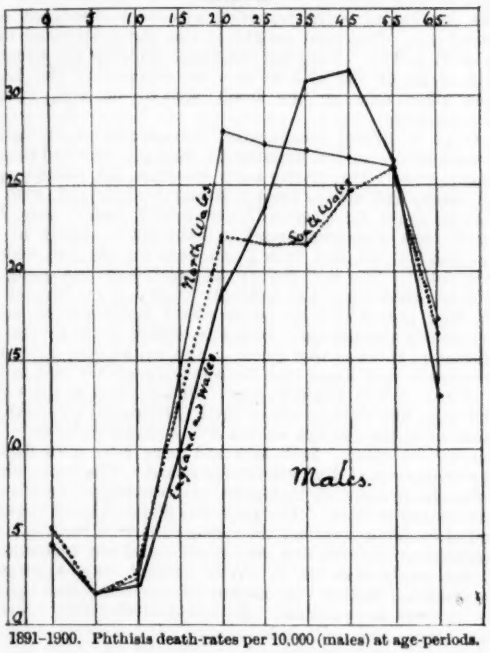
FIG. 4.



Wales. Phthisis death-rates per 10,000 (females) for decennia at age-periods.

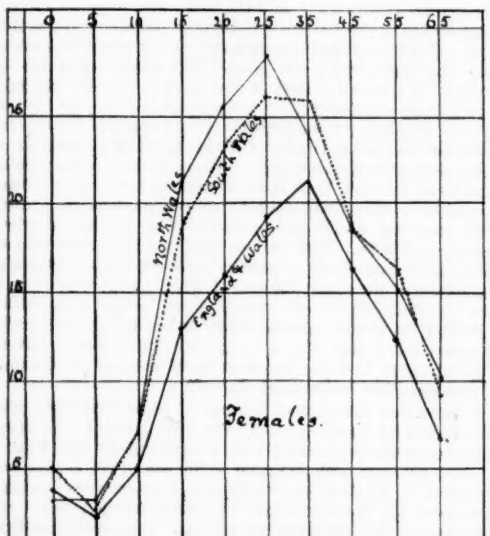
Welsh divisions, the three curves of female mortality are very similar in form. The curve for South Wales shows that the age of maximum mortality is being postponed. The curves of male mortality in the Welsh divisions differ materially in form from the curve for England and Wales. In North Wales the age of maximum mortality is 20–25 years, and a high rate of mortality is maintained until the 55–65 age-period.

FIG. 5.



1891–1900. Phthisis death-rates per 10,000 (males) at age-periods.

FIG. 6.



1891–1900. Phthisis death-rates per 10,000 (females) at age-periods.

In South Wales a similar period of high mortality is recorded, but the maximum mortality occurs at the 55–65 age-period. In England and Wales the mortality from phthisis increased to a maximum at the 45–55 age-period. At the earlier age-periods it was lower than the mortality in Wales, but in the 25–35 age-period it exceeded that of South Wales, and in the next age period that of North Wales also. The discussion of the significance of the differences in the age incidence of phthisis must be deferred until the county statistics for the last decennium are published.

TABLE V.—*England and Wales, 1891–1900. Death-rates from Phthisis at Age-periods per 100,000 living.*

Age-period.	Males.			Females.		
	England and Wales.	South Wales.	North Wales.	England and Wales.	South Wales.	North Wales.
0—	44	55	45	38	51	32
5—	17	17	17	24	26	33
10—	23	29	27	50	71	72
15—	99	125	142	129	188	211
20—	189	221	280	159	233	256
25—	237	216	272	192	261	284
35—	309	216	269	212	259	239
45—	314	247	265	164	186	185
55—	262	260	261	124	162	152
65—	130	166	173	67	92	102

Liverpool.

NOTES ON THE CLINICAL APPEARANCES IN TWO CASES OF CEREBRAL DISEASE,

ONE BEING GRAVE ORGANIC DISEASE AND THE OTHER PURELY FUNCTIONAL.

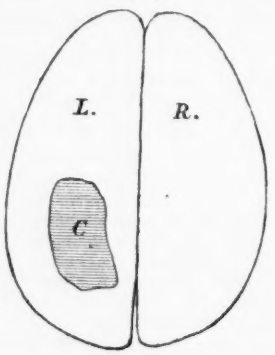
BY JOHN H. AYTOUN, M.B., C.M. EDIN.

MY reason for publishing the two following cases is to show the resemblance which a case of grave organic disease of the brain may bear to one of purely functional disease of that organ; and also to show the difficulty which may exist in general practice in making a diagnosis in such cases. In both cases a correct diagnosis was made, but in neither of them could it be made for at least several hours from the time that they were first seen.

CASE 1.—The patient was a female, aged 29 years, born in the North of Scotland. Her mother had died at an advanced age. Her father, when I first saw her, was still alive and in fair health at the age of 60 years. Two of her father's brothers had died from apoplexy with paralysis, in each case the attack beginning after the age of 40 years. The patient had never been very robust. Some years before the attack for which I attended her she fell, injuring the dorsal region of her back. This part subsequently had the actual cautery applied. Since then she had always worn a poro-plastic support round the chest. She was a person of considerable intelligence, earning her living by acting as a housekeeper, but her work was light. She took her meals quite regularly and was strictly temperate. For some months before her attack she had become most religious and had attended a number of missionary and other religious meetings. During this time, also, she often complained of a feeling of weakness and of breathlessness on exertion. It was noticed that she was unusually pale. Her employer said that for a week before her attack she was "queer." She seemed, however, to be in her usual spirits, and on the evening before her attack she went with her employer to call on some friends. On the day before her attack she told her employer that she had a peculiar sensation in her right arm. On the morning of her attack she got up as usual, made breakfast, and took some herself. After breakfast she went on with her ordinary work. Very soon she complained to a neighbour of feeling ill, and said that the left side of her head (pointing to the temporal region) was very painful. She was immediately put to bed in her clothes. She vomited a small quantity of bile-stained frothy liquid—the vomiting being accompanied by a considerable amount of gurgling in the abdomen. She moved about uneasily in bed and moaned frequently. At 10 A.M. I saw her for the first time; this was an hour after she became ill. She was lying in bed in her clothes, slightly on the right side. Her face was very pale. She rolled about in bed a little, and occasionally vomited a small quantity of mucus. Her eyelids were quite closed. On raising the eyelids the pupils were seen to be of equal size and neither

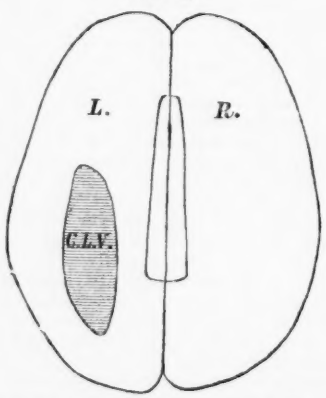
markedly dilated nor contracted. The conjunctival reflex was present on both sides. I noticed that on touching the left conjunctiva, in addition to spasmodic closure of the eyelids, there was also a marked drawing up of the angle of the mouth on the left side. The pupils reacted to light. On attempting to pass a finger into the mouth the teeth became violently clenched and the head was turned to the right side. I noticed that she was "unwell," and that the rectum was empty. The pulse was 84 per minute, regular, and of moderate force and volume. The vessel walls seemed to be healthy. The respirations became periodically slightly stertorous for a minute or so and then this symptom passed off. The temperature in the axilla was 97·8° F. Both legs and arms were quite flaccid and fell down when raised. Both knee-jerks were normal and no ankle clonus was present on either side. She could swallow, with some difficulty, a teaspoonful of milk when put into the mouth, but seemed to be quite unconscious. At 1 P.M. the patient's condition was very similar. There was slight retching of mucus occasionally. The teeth were still tightly clenched whenever a teaspoonful of milk was attempted to be poured into the mouth. No urine had been passed. At 7 P.M. the temperature was 101° and the pulse 150, small, and could only be counted with difficulty. The breathing was now stertorous, the face

FIG. 1.



Horizontal section of the brain at the level of the centrum ovale minus, showing clot in brain substance, C.

FIG. 2.



Horizontal section of the brain at the level of the centrum ovale majus, showing clot in the left lateral ventricle, C.L.V.

was still very pale, the eyelids were still closed, and the pupils continued equal, but did not react to light. The conjunctival reflex was entirely absent on the right side, and very slightly present on the left side. The teeth were still clenched. The left arm and leg were now both in an extended position and in a state of tonic rigidity, while the right arm and leg were flaccid, as if paralysed. In half an hour the conjunctival reflex was totally abolished on both sides. The face became livid, breathing more stertorous, and the patient died the same night.

Post-mortem examination.—On removing the calvarium the posterior half of the left cerebral hemisphere was seen to be bulged in a very marked manner. On horizontal section, exposing the centrum ovale minus, a large mass of dark clotted blood was seen to occupy the posterior and outer part of the left cerebral hemisphere. On making a similar section exposing the centrum ovale majus, a continuation of the same clot was seen, somewhat further from the surface and more elongated antero-posteriorly. It extended into the left lateral ventricle, which was much distended with blood-clot. The total weight of the clot I estimated to be from 3½ to 4 oz. I append diagrams showing the situation and shape of the clot as seen on sections of the brain. The right side of the brain showed no sign of any abnormality.

CASE 2.—Three weeks after the occurrence of Case 1 I was sent for in the morning to see a girl who had become unconscious. The history I got was that the patient, aged 18 years, had always been a strong healthy girl, and, as far as could be gathered, her family history was very good. She was accustomed to hard work. Early in the morning of the day that I was sent for she had become "unwell." She had got up as usual, and was going on with her work when she suddenly uttered a cry and fell on the floor, giving her head rather a hard knock and becoming apparently unconscious. She was carried to bed with her clothes on and was kept quiet. I saw her an hour after this occurrence and found that she was lying on her back in bed with her eyelids slightly open. She retched a little now and then, but nothing was vomited. She tightly clenched her teeth when any attempt was made to separate the jaws. The tongue was clean. Both legs and arms were quite flaccid, and dropped as if dead after being raised. The conjunctival reflex was present on both sides, and the pupils were equal and reacted to light. The pulse was 86 per minute, regular, and of moderate tension; the vessel walls were healthy; the respirations were regular and quiet; and the temperature in the axilla was 99° F. The patient lay apparently unconscious, taking no notice of anything and giving no answers to questions. Both knee-jerks were present, and there was no ankle clonus. On forcibly opening the mouth and pouring a teaspoonful of milk into it the milk was immediately rejected. The heart and lungs showed no abnormality, and the urine contained no abnormal ingredients. The patient's condition remained the same all day. The temperature came down to normal in the evening and the pulse remained good. The unconsciousness continued. I concluded that it was a case of hysteria major. The patient was allowed to remain quietly in bed, but was always watched by one person. She remained in the same state all the second day. On the third day, however, she became less drowsy and answered questions in monosyllables. She took for the first time a little nourishment without opposition. The temperature had remained during all this time between 99·2° and normal. The pulse was always regular and slow. The patient gradually became quite conscious and soon made a perfect recovery. She maintained that she had no remembrance of what had occurred on the two previous days. A month later, when she became "unwell," a similar attack came on in a less severe form. It lasted for a day and a half. No other attack has ever come on since, and she has now been married for a number of years and has had several children.

I think that the clinical features of these two cases which are worthy of note are:—1. The first patient was always delicate, while the second was always strong and healthy. 2. Both patients became rather suddenly ill while they were "unwell." 3. Both were apparently unconscious when I saw them for the first time. 4. Both retched when they first became ill, the retching in Case 1 persisting and that in Case 2 soon stopping. 5. In both cases the teeth were tightly clenched whenever an attempt was made to separate the jaws. 6. In both the conjunctival reflex was present on both sides when first seen.

It was really only the difference in the course of the disease in the two cases when watched for a few hours that made it possible to form a correct diagnosis in each case.

I have purposely given no opinion as to the predisposing or exciting causes of the attack in each case, as I wished merely to give the clinical symptoms and physical signs.

Broadstairs.

Medical Societies.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

Social Legislation and the Medical Profession.—Erysipelas following an Intranasal Operation.—Exhibition of Cases.

THE first meeting of the session of this society was held on Sept. 7th at the Queen's-road Dispensary, Brighton, Mr. T. H. IONIDES, the President, being in the chair.

Dr. W. BROADBENT showed a girl aged 8 with Friedreich's Ataxy. She had been perfectly normal up to four years of age, and was then noticed to be constantly tripping and falling. The child could not now walk at all and had ataxic choreiform movements of the upper limbs. There were curvature of the spine and talipes equino-varus. The knee-jerks were absent and the plantar reflexes extensor. There was an external squint in the left eye, said to have come on since the illness started; the discs were normal and there was no nystagmus.

Dr. DONALD G. HALL showed a baby aged 5, a Cretin, who was improving on small doses of thyroid extract.

Mr. G. MORGAN showed an Anencephalic Fœtus born at the eighth month.

Mr. J. TURTON read a paper entitled "Social Legislation and Legislative Proposals in their Relations to the Profession of Medicine." He traced the history of State or communal control of diseased persons from early times to the present day, and in reference to the latest proposal—the National Insurance Bill—he pointed out that the importance of the question of the health of the individual in its bearing upon the welfare of the State was so great and so obvious that legislative proposals in that connexion were at once removed from the arena of political party conflict, and the principles of such proposals being accepted by all parties their discussion immediately resolved itself into a mere question of detail; and paradoxical as it might sound, it might be asserted that in this fact lurked the great danger that in this branch of legislation the Statute Book might be the receptacle of many a crude and ill-digested enactment; for while the ordinary party questions were discussed and re-discussed in principle and detail, for more or less lengthened periods, in Parliament, by the press, and by the public, proposals like those of the National Insurance Bill which effected a revolution in the relations between the public and the profession, excited in Parliament merely an academic discussion on points of detail and formed the subject of negotiations intended to reconcile conflicting views, while the public generally displayed only a languid interest in a matter of great moment and of the very gravest importance to those engaged in the practice of medicine.—The paper was discussed by several members.

Dr. L. A. PARRY read notes of a case of Erysipelas following an Intranasal Operation, complicated with Meningitis, which ended in recovery. The patient was a healthy young man, who, for rather slight symptoms of nasal obstruction, was operated on by a London laryngologist in a nursing home. Two days later he was allowed to travel to Brighton, and in a few days developed an attack of pharyngeal erysipelas, which subsequently spread to the face. A typical attack of meningitis was the next event, and both Dr. E. Hobhouse and Sir Victor Horsley, who saw the patient, gave a practically hopeless prognosis. Large and frequent doses of polyvalent anti-streptococcic serum were given and the patient made a good recovery. Dr. Parry raised the question of the danger of intranasal operations, and deplored, firstly, the very trifling symptoms to relieve which this class of operation was so readily undertaken by the nasal specialists, and, secondly, the short period of after-treatment which the operators seemed to consider necessary. Patients were allowed to be up and out at a time when they should be in bed and having careful nursing.

Reviews and Notices of Books.

The Medical Diseases of Children. By REGINALD H. MILLER, M.D.Lond., M.R.C.P.Lond. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. Bristol: John Wright and Sons, Limited. 1911. Pp. 518. Price 12*s* 6*d*.

THIS new work on the medical diseases of children will occupy a somewhat ill-defined position in the library of pædiatrics. Its limitations will preclude it from ranking among the larger text-books on the same subject, while it is far removed from the category of a cram book or "aid" for examination purposes. In his preface Dr. Miller states that his aim has been to produce a book of teaching value, and judged by this standard the work is an undoubted success. In one other respect we would quote the preface, for the passage will explain the extreme modernity of the author's methods: "Probably the time will come when we can classify all the infective processes mainly according to the infecting organism, and we shall speak of the pneumococcal, staphylococcal, streptococcal, and other infections as diseases, in the same way that we have for long spoken of tuberculosis and more recently have learnt to speak of rheumatism." Both statement and prophesy reveal the author's general attitude.

When we state that out of 518 pages 168 are devoted to infective diseases we indicate the bias of the work and supply the reader with a key which will admit him at once to the author's real presence. The rest of the book is mainly a compilation, quite fairly and ably made, but one which might have been made and personally supported by many hospital physicians; the chapter on infective diseases is a creation. Among infections, that by the pneumococcus stands first in order. It includes separate sections on infection of the lungs, of the pleuræ, of the heart and pericardium, meninges, peritoneum, kidneys, and joints. The account of pneumonia is excellent, especially that part of it which is concerned with the differential diagnosis between this condition and scarlet fever, acute meningitis, otitis media, appendicitis, cyclical vomiting, and acute tuberculosis. As regards treatment, the value of the ice-bag is emphasised. In the general diagnosis of pneumococcal infection the expedient of the blood count, and in the recognition of pneumococcal meningitis the value of lumbar puncture, are repeatedly referred to. The vaccine treatment of this infection is not mentioned, an omission at which we are not wholly surprised.

Next in order is described the rheumatic infection, an infection which covers a great number of more or less independent lesions. Dr. Miller is careful to explain the liability in children to the generalisation of infections, and this is particularly the case in rheumatism, whether acute or chronic. Since Dr. W. B. Cheadle's original lectures on the rheumatic state in childhood, we do not know a better account of the many and varying manifestations of rheumatism than is here written by Dr. Miller. Moreover, we believe that the author has performed a very great service in indicating the right use of the salicylates. There can be little doubt that the salicylates have a specific influence on the disease, but the dosage may have to be pushed to 150 or 200 grains per diem. The depressing influence of this line of treatment either has no existence in fact or has been greatly exaggerated. The salicylates may, however, produce an acidosis unless combined with a free exhibition of alkalies, and this fact Dr. Miller takes care to emphasise. Thirteen pages are devoted to the subject of chorea, a matter on which Dr. Miller has already communicated his views to the medical world. That he regards chor a

exclusively as a rheumatic manifestation may be assumed without question. Moreover, he believes that in rheumatic subjects, and especially in those of neuropathic tendencies, there is often a condition of latent chorea which is not suspected. Although erythema nodosum and rheumatoid arthritis are included among the rheumatic infections, the author regards them as manifestations of specific diseases, due to bacterial infection distinct from the ordinary infective organism of rheumatism.

Dr. Miller's work accurately reflects contemporary hospital teaching, but there is too much of the labeling of diseases by distinctive and often bacteriological nomenclature; there is too little in his writing of the individual and personal index of the child, both in health and disease; there is too much "cure" and too little prevention. The composite picture of disease is altogether too dependent on sharply defined mosaic work for our liking. The author has presented us with a book which possesses many merits, not the least being the promise of future and better work based on an extended experience.

Der Gynäkologischer Operationskursus an der Leiche. (A Course of Operative Gynæcology.) By Dr. WILHELM LIEPMANN. With 387 (in large part coloured) illustrations. Berlin: August Hirschwald. 1911. Pp. 456. Price 22 marks.

Dr. Liepmann has written an admirable manual of operative gynæcology, presenting several novel and striking features. On four points he lays stress—viz., the anatomy, the pathology, the bacteriology, and the causes of failure in the operations he describes. The anatomy is essentially applied anatomy, and his figures are the more instructive since the subject is in nearly all of them represented in the Trendelenburg position, so that the relation of the structures is the same as that in which they would appear to the operator during the performance of the operation. There are a large number, many of them coloured, of anatomical plates which are of the greatest value, and associated with the description of each operation is a short account of its chief anatomical relations. The pathology of the various procedures is illustrated both by preparations depicting the conditions found at the time of operation and also those persisting after the operation has been completed—conditions of which but little is said in the ordinary text-book of operative gynæcology.

The importance of bacteriological observations at the time of an operation is becoming more and more recognised, and the numerous examples quoted by the author in which such an investigation of the tissues at the seat of operation has led to the adoption of some particular mode of procedure are most interesting. The two operations in which an exact knowledge of the condition of the tissues as regards the presence or absence of organisms is of the greatest importance, are those of extra-peritoneal Cæsarean section and Wertheim's extended operation for carcinoma of the cervix. As Dr. Liepmann has shown, the cellular tissue in the broad ligaments in cases of cancer of the cervix contains not infrequently numerous organisms, and in these circumstances drainage through the vagina is of the utmost importance. No doubt in the future the assistance of the skilled bacteriologist will become a necessity in every well-equipped operating theatre, and upon his findings will depend in many instances the determination as to what particular operation shall be undertaken or whether drainage is necessary in any particular case. In such conditions the results obtained should be even better than they are now, and in many instances a correct conclusion will be come to where at the present time the surgeon would often have very grave doubts as to the best course to pursue.

Another most interesting feature of this work is the space devoted to the causes of failure in any given operation. From these sections the young surgeon will learn much, and a perusal of them will go far towards preventing his becoming involved in difficulties in the course of his operative work. The descriptions of the operations themselves and of the technique are very good, and the whole forms a very complete guide to the subject.

Dr. Liepmann is to be congratulated upon the production of a book of much originality, and one which cannot fail to obtain a wide circle of readers both in Germany and in other countries.

Etiology of Beri-beri. By HENRY FRASER, M.D. Aberd., Director, Institute for Medical Research, and A. T. STANTON, M.D. Tor., Bacteriologist, Institute for Medical Research, Federated Malay States. Singapore: Kelly and Walsh, Limited. 1911. Pp. 89. Price 7*s.*

THIS work contains the results of an inquiry begun under instructions from the Government of the Federated Malay States. Probably there is no disease that has been the subject of more varied hypotheses concerning its intimate nature; but the authors of this valuable treatise have, as can be seen by a study of the book, contributed, it would appear, the key to its elucidation.

The Malay peninsula has long been known as an endemic focus of the malady, and the recorded sickness and mortality during the past several decades show what great economic losses have resulted from its ravages. The researches carried out in 1907 and 1908 that form the basis of the present book were originally published by the authors in THE LANCET of Feb. 13th, 1909, and were editorially commented on in our following issue, and in those of May 8th, August 7th, and Oct. 9th of the same year. The authors found that as the result of observations on 300 labourers, who were divided into two parties of equal number, and were housed some miles apart, those who were given white rice were seized with beri-beri, whilst those who lived on parboiled rice were free from it. They also found that place *per se* or considered as a nidus of infection had no influence on its development. Again, substitution of parboiled rice for white rice among parties of men attacked with beri-beri was followed by the cessation of the outbreak. The existing status of the subject was reviewed in a leading article in THE LANCET of March 12th, 1910.

Next follows a detailed account of their feeding experiments upon fowls with rice, the outline of which also was published by the authors in THE LANCET of Dec. 17th, 1910, in a further communication on the Etiology of Beri-beri. These experiments showed that fowls fed on white polished rice developed a form of polyneuritis analogous to beri-beri in its clinical manifestation and pathological effects, whilst those which were fed on unpolished rice remained healthy. A period of three to four weeks' feeding on white rice was found constantly to cause the development of the polyneuritis. It also appeared that the harmfulness of a rice diet varied directly as the extent to which the rice had been milled; so the authors tested their rice hypothesis still further by adding to a white polished rice, which when given alone was shown to be harmful, a quantity of polishings equal in amount to that which had been milled away, with the result that the fowls remained healthy. They also showed that no poison is developed in the white rice, as it is equally harmful whether freshly prepared or whether stored for months. The subject of the phosphorus content of rice as an indicator of the extent to which rice has been polished is next considered. It was found that Siam polished rice yielded 0·26 per cent., Rangoon polished rice 0·328 per cent., and Malay 0·38 per cent. of phosphorus pentoxide, the incidence of beri-beri

being less the greater the proportion of the latter. Parboiled rice, however, yielded 0·415 per cent. and unpolished rice 0·54 per cent. of phosphorus pentoxide, without any appearance of the disease. As the result of these long-continued and thorough researches, the authors conclude that rice is rendered harmful by the milling and polishing process to which it is subjected in the preparation of white polished rice, as the process removes some substance of high physiological importance in the metabolism. Accordingly, as measures for the prevention of the disease, they recommend the use of unpolished or under-milled rice by the classes of the community in which the disease occurs.

The authors have contributed a most valuable addition to our knowledge of beri-beri; they have made it certain that whilst polished rice will cause beri-beri, unpolished rice will not have this effect. The work contained in this volume will be a monument to their labours in a tropical country.

A Systematic Handbook of Volumetric Analysis. By FRANCIS SUTTON, F.I.C., F.C.S. Tenth edition, revised throughout, with numerous additions by W. LINCOLNE SUTTON, F.I.C., and ALFRED E. JOHNSON, B.Sc. Lond., F.I.C., A.R.C.Sc.I. London: J. and A. Churchill. 1911. Pp. 621. Price 21*s.* net.

"SUTTON," as it is familiarly called by the analytical chemist, is a remarkable book. It stands quite alone in English scientific literature as the one authoritative work on volumetric analysis which is consulted by everyone—the physician, the medical officer, the analytical chemist, the public analyst, the works chemist, the pharmacist, and so forth. It was first produced by Mr. Francis Sutton of Norwich (who is now in his eighty-first year) in 1863, new editions succeeding in 1871, 1876, 1882, 1886, 1890, 1896, 1900, and 1904. The present edition (the tenth) has been prepared jointly by Mr. W. Lincolne Sutton, the author's son, and Mr. Alfred E. Johnson, both of whom can claim an intimate acquaintance with analytical methods and procedure. It is no easy task to bring a work of this sort into line with modern developments, as there are workers in the field in all parts of the world, and it is an onerous undertaking to collect the valuable additions which are made from day to day to the elaborate literature of analytical procedure. Nevertheless, the task has been very well done, and "Sutton" once again is an indispensable source of reference on volumetric analysis, and a work of commercial as well as of scientific importance. It contains sections, for example, on the assay of aniline, soaps, tannin, phosphates, metals, coal-gas, and numerous other products of technical importance, besides chapters on the more recent methods of analysis of urine, water, air, and so forth. References are found in the text to literature of as recent date as 1910, an instance of which occurs in the paragraph on the direct titration of iron by titanous chloride, a new reduction method available for volumetric analyses due to Messrs. Knecht and Hibbert. It may be noted also that portions of the section on sugars have been rewritten, and a well-known authority on the subject (Mr. A. Ling) has contributed an account of his most recent methods of procedure in the use of Fehling's solution. The article on acetone has also been rewritten and recent methods for the analysis of fats have been added. Liebig's method for the determination of urea has become now a mere historic method, which has had to give place to simpler and more accurate technique. In view of the large amount of analytical work that of recent years has been devoted to questions of sewage disposal and water-supply, the sections under these heads have been revised and re-arranged. We notice, however, that the old table giving typical analyses of water and sewage is retained. This might with advantage have been brought up to date, the analyses having been made during a period ranging from 1869 to 1889. Most of the analyses recorded bear the date of 1872 or 1873. This is the only example we have found of an omission to supply figures derived from recent analyses, but it is an important one.

The book is one which a very wide range of scientific workers must keep by them.

Bismuth Paste in Chronic Suppurations, its Diagnostic Importance and Therapeutic Value. By EMIL G. BECK, M.D., Surgeon to the North Chicago Hospital. With an introduction by CARL BECK, M.D., and a chapter on the Application of Bismuth Paste in the Treatment of Chronic Suppuration of the Nasal Accessory Sinuses and the Ear by JOSEPH C. BECK, M.D. With 81 engravings, 9 diagrammatic illustrations, and a coloured plate. London: George Keener and Company. 1910. Pp. 237. Price 10*s.* 6*d.* net.

THE value of bismuth paste in the treatment of chronic suppurating sinuses was discovered accidentally. It was desired to have a skiagram of a sinus, and for this purpose it was filled with a liquefied paste composed of bismuth subnitrate and vaseline. The skiagram obtained showed clearly the ramifications of the sinus, but to the surprise of Dr. Carl Beck and his brother, the sinus ceased to suppurate and has not suppurated since. From this case arose the practice of employing bismuth paste, and the results in certain cases have been very surprising, but necessarily the treatment often fails. Still, its successes have been so numerous that it deserves to be more widely employed. For diagnostic purposes, also, bismuth paste is of great value, for the course and extent of sinuses may by its use and by X rays be recognised to an extent impossible by any other means. Dr. Emil Beck has done well to publish this book so that the method may be more widely known. The method has also been employed in chronic suppuration of the sinuses communicating with the nose, and also after a mastoid operation. It has also been used with some success for pyorrhœa alveolaris. It is possible that its advocates are a little too enthusiastic, but that it is of value can hardly be doubted.

A Manual of Physical Diagnosis. By BREFNEY ROLPH O'REILLY, M.D., C.M., F.T.M.C. Toronto, M.R.C.S. Eng., L.R.C.P. Lond., Demonstrator in Clinical Medicine and in Pathology, University of Toronto; Assistant Physician to St. Michael's Hospital, Toronto; Physician to Toronto Hospital for Incurables. With 6 plates and 49 other illustrations. London: J. and A. Churchill. 1911. Pp. 369. Price 8*s.* 6*d.* net.

THE subject of physical diagnosis, or the correct observation and interpretation of physical signs, is one of vital importance to the student in the study of practical medicine, since the acquisition of correct methods of examination of medical cases is an essential to scientific diagnosis. Dr. O'Reilly supplies in the book before us a useful epitome of the various methods of physical examination, with simple and careful descriptions of the individual signs and of their significance. After some general directions in regard to the interrogation of the patient, so as to obtain a satisfactory clinical history, the rôle of inspection is discussed at considerable length. Various characteristic gaits and facies are described, and then the information afforded by inspection in regard to special systems and organs is categorically dealt with. Some useful details of the topographical relations of the various important viscera are given in a special chapter. The systematic examination of the respiratory, circulatory, digestive, genito-urinary, and neuro-muscular organs is then discussed, all the ordinary methods being clearly

described without unnecessary technicalities. Where instrumental methods afford useful information they are referred to, together with descriptions of tracings and their interpretation. An appendix is devoted to the simpler laboratory methods used in the investigation of urine, blood, sputum, gastric contents, fæces, and serous fluids. A few coloured plates are given, showing the characters of urinary deposits, blood corpuscles, and bacteria.

This book is carefully written and well produced; it should form a useful manual for the student during his work in the wards and out-patient departments, since it is of convenient size, easy of reference, and while avoiding unnecessary detail gives sufficient information to be of real value.

Handbuch der Vergleichenden Physiologie. (*Handbook of Comparative Physiology.*) Herausgegeben von HANS WINTERSTEIN. Vierzehnte Lieferung. Band IV., Physiologie der Reizaufnahme, Reizleitung, und Reizbeantwortung. Erste Hälfte. Jena: Gustav Fischer. 1911. Pp. 161–320. Price M.5.

Dr. Baglioni in this "Heft" continues his exposition of the physiology of the nervous system of echinoderms, and we are particularly glad to see that he does full justice to the excellent work of the late Professor Preyer on this subject, although, of course, like Dr. Baglioni, we can hardly endorse all the views of the former versatile and talented professor of physiology in Jena. His work led up to that of Romanes and others some years ago, and is continued, though from a different aspect, by that of von Uexküll, as well as by American observers. There is apparently no reference to the recent work of Jennings on Starfish, as published in the Carnegie publications. "Autotomy" is dealt with as it occurs amongst both Starfish and Crustacea, and a wonderfully interesting subject it is. This chapter can be heartily commended to the attention of marine biologists.

Over 60 pages are given to the Mollusca, but only a very short account to the Lamellibranchs; the Gastropods fare better, first the marine forms and then the pulmonate or land forms; the latter especially have been extensively studied, but still much remains to be done. To the real aristocracy amongst the Molluscs—the Cephalopods—as befits their eminent position and their remarkable physiological activities—much attention has been given, and the results are chronicled in 60 pages of interesting matter. The physiology of the chromatophores alone is a chapter of the greatest interest, both to the physiologist and to the naturalist. There is far more in the remarkable colour changes than meets the eye. A good comprehensive summary of colour changes in marine invertebrates has yet to be written. Few things are more surprising than the rapidity with which certain of these "quick changes" in colour are effected under nervous influences proceeding from the central nervous system.

The Arthropoda have also been pretty fully investigated. The "reflexes" in the crustacea have been the subject of many investigations. Not the least interesting is the phenomenon of "hypnosis," as manifested by a cray-fish standing on its head; this was described by Czermak many years ago. A full account is given, after Doglein, of the attitudes and reflex activities of the decapod Leander and the conditions which influence and modify its reflex activities. The devices adopted to ensure what is called protective resemblance constitute a wonderfully interesting chapter in the life-history of certain crustacea. Nor are the results of the researches of Pouchet, Keeble, and Gamble on cutaneous colour changes less interesting. Fredericq's researches on self-amputation of limbs—autotomy—are fully set forth, and so are Bethe's results of his elaborate researches on Carcinus mænas, to which several pages are devoted.

Carlson's investigations on the rate of propagation of a nervous impulse in Myriapods are described, and then the author proceeds to deal with the Insecta, obviously a large chapter, of which only the beginning is included in this "Heft." The production of light by certain nocturnal insects, although referred to in an earlier Heft, is again dealt with from the point of view of its relation to the nervous system.

This compilation of Dr. Baglioni on the nervous system promises to be one of great value both to the physiologist and the zoologist.

Kompendium der Topischen Gehirn- und Rückenmarksdiagnostik. By Dr. ROBERT BING, Privat-docent for Neurology in the University of Basle. Second edition, enlarged and improved. Berlin and Vienna: Urban and Schwarzenberg. 1911. Pp. 208. Price, paper, 6 marks; bound, 7.50 marks.

Compendium of Regional Diagnosis in Affections of the Brain and Spinal Cord: A Concise Introduction to the Principles of Clinical Localisation in Diseases of the Central Nervous System. By ROBERT BING, Privat-docent for Neurology in the University of Basle. Translated by F. S. ARNOLD, B.A., M.B., B Ch. Oxon. With 70 illustrations. London: Rebman, Limited. 1911. Pp. 215. Price 10*s.* 6*d.* net.

NOT long ago we reviewed the first edition of this compendium of anatomical and clinical diagnosis, and welcomed it as likely to prove most useful to students and others who desire to familiarise themselves in detail with the clinical anatomy of the nervous system. A second edition has speedily been called for, and the author has taken the opportunity of augmenting that section of the book which deals with cerebral anatomy—a division that, as we remarked at the time, deserved handling on a rather more adequate scale. We are pleased to find that such matters as localisation in the motor cortex, tumours of the ponto-cerebellar angle, aphasia, apraxia, and the pituitary and the pineal glands, are treated in greater detail, and we can cordially recommend Dr. Bing's compendium to student and practitioner alike, both for its excellent diagrams and its readable and accurate text.

The translation of Dr. Bing's Compendium into English also deserves commendation. It is essentially a short practical *vade mecum* of a didactic character, intended to aid the physician or surgeon called upon to localise a pathological process affecting the central nervous system. As we remarked in reviewing the first German edition, one of its most satisfactory features is that the details of clinical anatomy are given with greater completeness than in most text-books, but the addition of unusually clear and simple diagrams prevents these details becoming unwieldy and confusing. With a good index, well printed, and well illustrated Dr. Bing's Compendium in its German or its English form ought to be one of the books to work from in every medical practitioner's library.

LIBRARY TABLE.

Tuberculosis as a Disease of the Masses and How to Combat it. By S. ADOLPHUS KNOPF, M.D. Seventh American edition. New York: Published by "The Survey." 1911. Pp. 124. Price 25 cents.—In this small work Dr. Knopf gives his views as to the measures which should be adopted in an endeavour to combat tuberculosis, mainly dealing with the pulmonary variety. He writes in a popular manner, and gives useful directions as to the mode of life which individuals suffering from the disease should follow. He also indicates the early symptoms of tuberculosis of the lungs. With most of Dr. Knopf's remarks we are in agreement, but we cannot altogether support him in the free use which he makes of the word "cure." For instance, he says: "Of all chronic diseases tuberculosis is the most curable, and of late years

the most frequently cured." In formulating this statement he makes no distinction between the pulmonary form and the other varieties of tuberculosis. With regard to the former, the term "arrest" would often be more suitable, with the addition that in a certain number of cases the arrest proves permanent. We cordially support him, however, in the views which he expresses as to the prophylactic means which should be adopted to stay the spread of the disease. Briefly stated these are: educate the masses in right living and the prevention of tuberculosis; treat the "curable" cases in sanatoriums or at home; take care of the advanced cases in special hospitals; provide "preventoria" for predisposed adults and open-air schools for children; improve the housing of the masses, particularly the sleeping and working quarters; suppress child labour and restrict woman labour; combat alcoholism and other social diseases by sane and humane laws and wise preventive and curative measures. We agree that it cannot be too deeply impressed upon the lay mind that tuberculosis as a disease of the masses has a large social aspect, and that without improving the social conditions of the people tuberculosis will never be eradicated.

Mental Mechanisms. (*Nervous and Mental Disease Monograph Series*, No. 8.) By WILLIAM A. WHITE, M.D. New York: The Journal of Nervous and Mental Disease Publishing Company. 1911. Pp. 151. Price $2.—This book consists of a series of papers dealing with certain psychological and psychiatrical subjects, and is intended to explain and emphasise those fundamentals which appear to the author essential to an understanding of present-day psychiatry. The papers, for the most part previously published independently, tend somewhat to overlap, while their style is diffuse, but as a presentation of a selection of our knowledge on such subjects as consciousness in various aspects and psycho-analysis they are not inadequate.

Physiology of the Central Nervous System and the Special Senses. By N. J. VAZIFDAR, L.M. & S. Bombay: James and Sons. 1911. Pp. 107. Price 2 rupees (or 2*s.* 8*d.*), post free.—This little compilation from well-known English textbooks was written for students of the author's class preparing for the intermediate M.B. examination of the Bombay University. It is merely a series of elementary notes with plenty of misprints—e.g., filum terminal, lumber, aqueduct of Sylvias, Gower's tract, Turck, locomor ataxy, Monako's bundle, Grandy, mesentry, papillœ, to mention only a few. With thorough revision it might possibly prove useful for the purpose for which it was intended.

Instructions in the Use of the Catheter, especially Written for Male Nurses. By a Surgeon. London: George Pulman and Sons, Limited. 1911. Pp. 32. Price 1*s.*—That only qualified men should pass catheters on living patients is undoubtedly, as the author says, a counsel of perfection. But inasmuch as patients sometimes require a catheter to be passed four or six times in the 24 hours, it is clearly desirable that the male nurse should be trained to carry out this operation under the directions of the medical attendant. To assist the nurse in performing this duty properly these instructions have been written. They are clear and detailed enough to be grasped, and adequate stress is laid on the methods of preserving surgical cleanliness. The advice given by the writer at the end, if followed, will minimise the danger of over-zealousness.

Album of Photographs issued by the South Indian Branch of the British Medical Association. London: John Bale, Sons, and Danielsson, Limited. 1911. Pp. 55. Price 10*s.* 6*d.* net.—This is a praiseworthy endeavour to collect and render available some of the large amount of material of pathological value that lies buried in the South of India. In the Madras Presidency there is one district European medical officer to about 1,500,000 inhabitants, and even the general hospital of the Presidency has not a whole-time pathologist on its staff. To Captain A. C. Ingram, I.M.S., belongs the credit of the inception of this enterprise, for he wrote to all the medical officers of the Presidency for a loan of photographs of surgical and pathological curiosities, and the South Indian Branch of the British Medical Association undertook the expense of publishing them. One point illustrated by the photographs is the enormous size to which natives in India allow tumours to grow before having recourse to a European surgeon. Among the things pictured are fœtal monstrosities, including cyclops, achondroplasia, leontiasis ossea, myositis ossificans, horny growth from the cheek, a pendulous fibro-lipoma of the neck, multiple fibroma molluscum, mycetoma, elephantiasis of the scrotum, legs, and prepuce, and Mikulicz's disease.

Complete Text-book of Physical Exercises, with 240 Illustrations and Music (specially adapted for the Use of Public Elementary Schools). By ISABEL MURRAY. London: Simpkin, Marshall, and Co. 1911. Pp. 191. Price 3*s.* 6*d.* net.—Physical exercise plays an important part in any well-considered plan of education, and has formed the subject of a recent memorandum issued by the Board of Education. With the object of supplementing the exercises recommended by the Board the author of the "Complete Text-book" has drawn up a number of well-thought-out exercises, which should prove useful to teachers in their efforts to make physical exercises interesting to their pupils. The exercises are graduated for senior and junior classes, and include simple dance steps, maypole exercises, figure marching, and free-arm movements on the march. The movements described in the text are illustrated by diagrams and reproductions from photographs; a selection of popular airs suitable for the exercises adds to the practical value of the book. In all forms of physical exercise it is essential that the interest of the pupil should be maintained, and the author would seem to understand the art of making "drill day" both attractive and instructive.

JOURNALS AND MAGAZINES.

Biometrika. Vol. VIII. Parts I. and II. July, 1911. Cambridge: The University Press. Pp. 256.—The first and second parts of the eighth volume of *Biometrika* contain several papers of medical interest. First, a subject of some importance is discussed by Dr. D. Macdonald—namely, The Pigmentation of the Hair and Eyes of Children Suffering from the Acute Fevers: Its Effect on Susceptibility, Recuperative Power, and Race Selection. The material on which the work is based was obtained by noting the colour of the hair and eyes of all children admitted to the Glasgow Corporation Fever Hospitals during certain definite periods who were suffering from scarlet fever, diphtheria, measles, or whooping-cough. The method employed is to compare the percentage of each particular hair and eye colour found among each of these four classes of fever patients with the corresponding percentage found in the general population of children in the area from which they were drawn, as given by Tocher (Pigmentation Survey of School Children in Scotland, *Biometrika*, Vol. VI.). Broad categories of hair and eye colour are employed: thus hair is classed as black, dark, medium, fair, and red, and eyes as dark, medium, light, and blue. To take an example: 59·4 per cent. of the scarlet fever patients were recorded as having medium-coloured hair, whereas among the control population only 45·2 per cent. are thus described; thus it appears that medium-haired children are especially susceptible to scarlet fever. On the other hand, only 15·5 per cent. of the scarlet fever patients were "dark-haired," instead of 27·2 per cent. found

in the control, so that it may be argued that dark-haired children are less likely to take the disease. Fair-haired and red-haired children occur among the fever patients in about the normal proportion. Results of a corresponding nature are seen when eye colour is considered instead of hair colour, and are approximately the same for diphtheria, measles, and whooping-cough. The author concludes that "the medium-haired child is more liable to become infected than the red-haired, and much more so than the dark-haired and jet black-haired child; the fair-haired child occupies an intermediate position as regards infection." "The medium-eyed child is more liable to become infected than the dark-eyed, and much more so than the blue-eyed child. The light-eyed child occupies an intermediate position as regards infection. The light-eyed child appears to be more susceptible to diphtheria and whooping-cough than to scarlet fever and measles." With regard to these conclusions, the editor of *Biometrika* appends a note of warning—namely, that the hair and eye colour of the fever population was estimated by an observer different from that of the general population. Thus the excess in the medium class of both hair and eye colour in the former may be due to the personal equation. This possible source of error is not present in that part of the work which deals with the relation between recuperative power and the pigmentation of hair and eyes, since here no comparison with the general population need be made. With two exceptions that do not invalidate the conclusion, it is found that for these four diseases the percentage of severe cases and the percentage of deaths are smaller among dark-haired children with dark eyes than among medium-haired children with medium eyes, and that they are smaller among the latter than among fair-haired children with light eyes. Red hair occupies an intermediate position with regard to recuperative power between medium and fair. G. D. Maynard contributes a note on the age distribution of deaths from diabetes mellitus. His statistical analysis shows that deaths from this disease fall into three classes corresponding with growth, reproduction, and old age. The age distribution of deaths in each can be described by simple frequency curves. The mean age of death in the first-named class is (for males in England and Wales) 9·5 years, in the second 30·84 years, and in the last 69·37 years. By summing the three simple curves a complex curve is arrived at which represents fairly accurately the general death-rate from diabetes at different ages. Professor Karl Pearson, in a paper entitled "The Opsonic Index—'Mathematical Error and Functional Error,'" controverts two views expressed by Sir Almroth Wright: firstly, that "the enormous working errors in opsonic estimation" are largely functional errors due to a faulty application of the method by imperfectly trained observers, and only to a small extent errors of method; secondly, that functional errors cannot be evaluated by a mathematician. Professor Karl Pearson has set himself as a mathematician to evaluate the "functional error," and in so far as his material goes he finds it as great in Sir Almroth Wright's laboratory as elsewhere; but wherever found he considers it small compared to errors arising from such other sources as "random sampling." Dr. Frank Rock's short note on the Tooth-brush and Decayed Teeth may perhaps be considered of medical interest. It is based on the medical examination of 556 boys and 507 girls, all over 13 years of age, in schools at Edmonton. He finds that there is practically no correlation between the number of decayed teeth in the mouth and the daily or occasional use of the tooth-brush or its total neglect. The tooth-brush may improve the appearance of the teeth, but it does not appear to arrest decay. Possibly the tooth-pick may be of greater value. Of the remaining papers three deal with anthropometry—namely, the late Dr. Crewdson Benington's long and important work on Cranial Type Contours, J. I. Craig's Anthropometry of Modern Egyptians, and E. Schuster's First Results from the Oxford Anthropometric Laboratory. General biology is represented in a Third Coöperative Study of Vespa Vulgaris, by E. Y. Thomson, Julia Bell, M.A., and Karl Pearson, F.R.S.; on the Correlation between Somatic Characters and Fertility, by J. A. Harris, Ph.D.; the Inheritance of Fertility, by R. E. Lloyd, D.Sc.; Karl Pearson's remarks on Professor Lloyd's note, and his Further Remarks on the Law of Ancestral Heredity. There is one purely physiological paper on Pulse and Breathing Rates and their Relation to Stature, by Julia Bell, M.A. Two may be classed possibly under the heading pædagogy, the Teacher's Estimation of the General Intelligence of School Children, by H. Waite, M.A., and on the Significance of Teacher's Appreciation of General Intelligence, by W. H. Gilby, B.Sc., assisted by Karl Pearson, F.R.S. The remainder of the volume is concerned with statistical technique.

Klinik für Psychische und Nervöse Krankheiten. Herausgegeben von ROBERT SOMMER, Professor an der Universität Giessen. Band V., Heft 3, and Band VI., Heft 2. Halle: Carl Marhold. 1911. Price 3 marks each.—Band V., Heft 3, contains several papers of interest. 1. Dr. Steinbrecher's paper on the differential diagnosis of internal hydrocephalus concerns a case in which the symptoms of an infratentorial tumour were present, but the post-mortem examination revealed simply internal hydrocephalus. A number of similar cases are already on record. 2. Dr. Berliner describes a case of dementia paranoides apparently the result of a severe accident, and discusses the relation of the two. 3. Dr. Klett publishes a paper on the graphic representation of certain movements of expression, and describes in detail his method for registering the movements of the occipito-frontalis muscle under varying conditions. In Band VI., Heft 2:—1. Dr. Pfahl continues his communication on the investigation of voluntary movements by graphic methods. 2. Dr. Helmut Müller deals with a long series of personal experiments on the teaching of mentally defective individuals. He comes to the conclusion that in memory experiments with defective patients better results are obtained if the matter to be taught, say a line of poetry, is taught one half at a time (even though the words do not make sense), whereas in normal individuals the opposite holds good—viz., that the line should be learned from the outset in its entirety. 3. Dr. Margulies publishes a long paper on hystero-epilepsy, *apropos* of a case in which the method of psycho-analysis is applied to determine and to separate the hysterical from the epileptic elements in the clinical phenomena.

COLONIAL MEDICAL SERVICES.—*West African Medical Staff:* Mr. J. B. H. Dawson, senior medical officer, Sierra Leone, has retired on a pension. Mr. J. P. Fagan, deputy principal medical officer, Northern Nigeria, has been promoted principal medical officer, Northern Nigeria; Dr. F. G. Hopkins, deputy principal medical officer, Southern Nigeria, has been promoted principal medical officer, Gold Coast; Mr. F. Manning, senior medical officer, Northern Nigeria, has been promoted deputy principal medical officer, Northern Nigeria; and Mr. E. H. Tweedy, provincial medical officer, Northern Territories of the Gold Coast, has been promoted deputy principal medical officer, Gold Coast. Mr. R. H. Brierley, formerly a medical officer in Southern Nigeria, has been reappointed to the staff. The following gentlemen have been selected for appointment to the staff: Dr. L. W. Davies (Northern Nigeria) and Dr. J. B. Alexander (Gold Coast).—*Other Colonies and Protectorates:* Mr. W. H. Bomford has been selected for appointment as a Medical Officer in Fiji. Mr. W. Parsons has been selected for appointment as Medical Officer in charge of the Quarantine Station at Singapore, and Mr. E. Sutcliffe has been selected for appointment as a Supernumerary Medical Officer in the Leeward Islands.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 16, 1911.

Condensed Milks in the Infant Dietary.

THE investigations on public food questions which are undertaken by the Local Government Board from time to time reflect the highest credit upon that department. Already a valuable series of reports has been issued dealing with subjects of considerable public urgency. There have thus been published 14 reports, and a fifteenth report has just reached us in which the very important question of condensed milks in regard to their use as infants' foods is discussed. Dr. F. J. H. COUTTS is the author of the latest report, and it is obvious from the careful and painstaking inquiries that he has made that the present state of things in regard to the sale of condensed milk is most unsatisfactory and in many instances seriously opposed to the interests of public health. He has definitely ascertained that machine-skimmed condensed milk is used on a considerable scale for feeding infants, and he gives evidence in favour of the conclusion that this use is increasing. In spite of an honest label declaring the milk to be "machine skimmed" the mother buys the preparation; her poverty tempts her, and her ignorance may lead her to believe that she is taking the best course; and on all sides, therefore, infants are reared on a starvation diet. For to many poor women the words "machine skimmed" have a magic meaning, the milk has been treated by machinery not touched by hand, and is, of course, on that account specially pure. Others imagine the milk in the tin with these words upon it to be the thick rich milk from the top. Far, therefore, from deterring the use of such milk for infants, the words of the honest label actually appeal to the mother. It is well to remember in this connexion, too, that machine-skimmed milk is more profitable for the retailer to sell than the variety known as full-cream milk. The temptation to sell an article yielding 15 to 20 per cent. profit instead of 10 per cent. is hard to resist, but the acute sufferer over the advantageous deal is the helpless baby.

Dr. COUTTS'S most valuable recommendation, in our view, is that which refers to the prevention of the use of condensed skim milk for infant feeding. This is what is demanded in the name of humanity. The words "skimmed milk" or "machine-skimmed milk," which some firms put on the labels of their machine-skimmed milk, should not be in small type on an obscure part of the label or associated with words advising the use of certain full-cream blends produced by the same maker. "All these things," rightly observes Dr. COUTTS, "tend to confuse the purchaser and to lead to failure to recognise the real meaning of the warning." We agree with his view that some parents fail to understand how unsuitable these milks deprived of fat are for feeding babies, but a clear declaration could not fail to have some effect in educating them to know that all condensed milks are not alike in composition. Such a declaration would materially assist the efforts of all who are working to decrease our miserable infant mortality—medical men, nurses, and health-visitors alike—by impressing upon mothers the danger of such foods. If a definite declaration on the tin itself of the unsuitability of the food for infants could be pointed to a great difficulty would be surmounted. We suggest, however, that the words "unfit for infants" which Dr. COUTTS recommends for the labels of machine skimmed milks would create an unwarranted prejudice against the sale of the food for other and perfectly legitimate purposes. Machine-skimmed milk provides an abundance of valuable proteins, carbohydrates, and phosphates, and is of use, therefore, in the making of tea, coffee, cocoa, milk puddings, and custards. The words "unfit for infants" are calculated to create an impression that if the food is "unfit for infants" there must be something wrong about it for general purposes. We therefore think it would be better and more reasonable to demand that machine-skimmed milk should be labelled more or less as follows: "Not a substitute for mother's milk." Upon the question whether whole condensed milk, assuming that the purchaser has no difficulty in obtaining it, is suitable for the infant's needs, there is considerable divergence of medical opinion. Dr. COUTTS is inclined to think that there has been some tendency to exaggerate the evil effects of feeding on full-cream condensed milk. It is probable that a considerable proportion of children may thrive tolerably well when fed even over prolonged periods with a high quality of condensed milk, if the directions as to its dilution are sound and followed; but the coincidence of epidemic diarrhœa and condensed milk feeding, whether skimmed or whole, is a serious factor in the situation. In the case of skimmed milk every disorder that is the natural sequence of malnutrition may be anticipated, and the prolonged use of full-cream condensed milk is a very doubtful recommendation in the face of medical evidence upon the results of such a diet. In the returns made from time to time by medical officers which indicate the serious liability to epidemic diarrhœa in infants fed on condensed milk no differentiation is made between full-cream and machine skimmed milk, and it may possibly be the case, as Dr. COUTTS points out, that in some places the evils attributed to condensed milk may be partly due to the machine-skimmed variety. Again, the question whether full-cream condensed milk has any advantages over the same preparation condensed and preserved with the addition of sugar must not be left out of the calculation.

Many authorities ascribe the occurrence of rickets to overfeeding brought about by an excess of carbohydrate which unduly taxes the infantile metabolism — to, in fact, a want of balance, apart from a possible deficiency in fat, in the proportions of the various constituents of the food. "I have never seen," says Dr. ERIC PRITCHARD, "an infant uninterruptedly fed for six months on condensed milk—which is, of course, milk which has been

vigorously sterilised—who did not present unmistakeable symptoms of rickets." Dr. NEWSHOLME, the principal medical officer of the Local Government Board, holds that the importance of rickets as a cause of other diseases as well as deformities in childhood and in after life is insufficiently understood, and there is surely sufficient evidence to warrant the prompt establishment of new and more effective machinery that is calculated to exercise control over all articles supplied as food for infants, including condensed milk in its various forms. The State should step in wherever possible to prevent the waste of infant life which is due to ignorance and poverty, and, in the case of condensed milk, to render more difficult the commercial game of making things appear to be what they are not.

Cæsarean Section in Possibly Septic Cases.

THE operation of Cæsarean section, with its modifications, has attracted a good deal of attention of late, and in a manner which is of particular interest to the general practitioner, who in the first instance may have to bear the grave responsibility of the course to be pursued. The introduction within the last few years of the method of so-called extra-peritoneal Cæsarean section has given rise to much discussion, not only as to the merits of this modification of the operation, but also as to the conditions under which it should be performed. One of the most difficult problems which still remains to be solved is, What is the correct treatment to adopt in the case of women with contracted pelves who are in labour, and possibly or probably already infected? In some, at any rate, of these cases delivery through the natural passages may not only be very dangerous for the mother but must inevitably entail the sacrifice of the child's life. The answer to the question demands the consideration of the method of delivery which is best calculated to save both the life of the mother and of her child, and the crucial point is to determine whether any patient in these circumstances is infected or no. When the operation of extra-peritoneal section was first introduced it seemed to hold out the possibility of dealing safely even with definitely septic cases. The results obtained were, however, discouraging, and the general opinion at the present time is that this operation is not suitable for such cases. SELLHEIM has attempted to overcome the difficulty by his ingenious method of forming a permanent utero-abdominal fistula for the purpose of providing free drainage, and so avoiding the danger of infection from the septic interior of the uterus.

The whole question has been discussed on several occasions recently, and it formed one of the subjects for discussion at the Fifth International Congress of Obstetrics and Gynæcology held at St. Petersburg a year ago. On that occasion Dr. AMAND ROUTH presented a report of all the Cæsarean sections performed in this country by over 100 obstetricians and gynæcologists who were living on June 1st, 1910. This report has now been published.[1] The total number of the cases collated amounted to 1282, and the document is a model of what such a report should be and will long remain a mine of information on the subject of which it treats. At a meeting of the Obstetrical Section of the Royal Society of Medicine of London held in March of this year the question of Cæsarean section and its alternatives in women with contracted pelves who had been long in labour and exposed to septic infection was considered, the discussion being opened by Dr. ROUTH. A large number of obstetricians and gynæcologists from all parts of the kingdom took part in the discussion, and all the points involved were very fully considered. Dr. ROUTH's figures show very clearly the enormous difference which exists in the death-rate from Cæsarean section in clean, non-infected cases, as compared with that in suspect or infected cases: the death-rate in the latter amounts to some 17·3 per cent., or to 34·3 per cent. in almost certainly infected cases, as compared with a death-rate of only 2·9 per cent. in the non-infected or clean cases. As Dr. ROUTH truly remarked, the ideal operation for infected cases would be one which is free from the fœtal mortality of craniotomy, from the maternal mortality of the classical Cæsarean section, from the morbidity of pelviotomy and extra-peritoneal Cæsarean section, and from the sterilisation which accompanies all forms of hysterectomy. The difficulty in coming to a conclusion upon the results obtained by various operators lies in the fact that it is almost impossible to say whether any given patient is infected or not. Further than this, in many cases the infection is purely a local one, and remains so; and in other cases the condition is one of commencing general sepsis, and the patient will probably die, whatever be the manner in which she is delivered.

It was suggested by Dr. ROUTH, in opening the discussion, that the assistance of the bacteriologist should be invoked, so that by means of swabs taken from the cervix and the interior of the uterus the presence or absence of septic organisms could be ascertained. It was pointed out at once, however, that there may be great difficulty in determining, at any rate with sufficient rapidity, whether a given organism is a virulent one or not, and, as is well known, many forms of apparently pathogenic organisms may be present in the genital tract of a parturient woman and yet she may present no signs of sepsis and pass through a perfectly normal puerperium. It must be concluded, at any rate at the present time, that the plan of taking a swab from the cervix or from the liquor amnii in such cases is not likely to prove of much clinical value. In the first place, the pathologist is not likely to be at hand just when he is wanted; and, in the second place, his verdict must often in our present state of knowledge be far from accurate and therefore not to be relied upon with certainty. It is very necessary to make a careful distinction between infection of the liquor amnii—a purely local condition and dangerous to the patient only if the peritoneal cavity become infected, and infection of the tissues of the uterus itself—a much more

[1] Cæsarean Section in Great Britain and Ireland. With Tables of 1282 cases of Cæsarean Section by over 100 Living Obstetricians and Gynæcologists in Great Britain and Ireland. Being a Report read at the Fifth International Congress of Obstetrics and Gynæcology held at St. Petersburg in September, 1910. By Amand Routh, M.D. Lond., F.R.C.P. Lond., Obstetric Physician to Charing Cross Hospital, London, and Consulting Physician to Samaritan Free Hospital for Women, London. London: Sherratt and Hughes. 1911. Pp. 233. Price 5s.

dangerous state of affairs, and one requiring more radical treatment if it is to be dealt with effectively. Here again, however, we are met with the same difficulty, When is the liquor amnii infected and how are we to determine this with certainty? Any conclusion upon this point must be mainly guesswork, and no reliance can be placed upon the presence or absence of an offensive odour. Some are in favour of a procedure carried out by Dr. DRUMMOND MAXWELL in one case, in which he irrigated the amniotic cavity and then performed Cæsarean section, but this method can have, we fear, but a very limited scope, and in the presence of really virulent organisms would prove of little value. In cases where the liquor amnii appears to be certainly infected, most reliance must be placed upon careful isolation of the peritoneal cavity, on eventration of the uterus, and on the application of the ordinary surgical principles which would be employed in dealing with any other septic abdominal condition requiring laparotomy. An interesting feature of the discussion at the Obstetrical Section of the Royal Society of Medicine was the very small amount of support accorded to the operations of pubiotomy and extra-peritoneal Cæsarean section. It is true that few of the speakers seemed to have much experience of either operation, and the arguments brought against them were not founded upon actual occurrences. Regarded from the critical standpoint it would appear, however, that neither of these two operations is suitable for really septic cases, and indeed that appears to be the view of most authorities at the present time. That they may both be attended with very good results in clean cases is certain, but their exact place among obstetrical operations still remains to be defined with precision in the future.

No one would be found to recommend craniotomy on the living child, but cases will inevitably occur from time to time when the safest procedure from the mother's point of view will entail the sacrifice of her child, and in this country the opinion in such cases has always been, and still is, that the life of the mother must be considered of greater value than that of the child. In certain cases and circumstances there is no procedure available which minimises the risk to the mother to so great a degree as craniotomy, and while these conditions remain so long will the operation be justifiable in selected cases. For doubtfully septic cases, when Cæsarean section is thought advisable, it should certainly be followed by removal of the uterus, which in all probability is infected. If the infection is still a local one the mother's life will generally be saved, while if it has already become generalised she may die, no matter what procedure is adopted. It is possible in the future, when we have more knowledge of the different varieties of pathogenic organisms and are able to recognise with certainty those which are virulent, that the bacteriologist may prove of help, but for the present the question of the presence of sepsis must remain largely a matter of dubiety, and the doubtful cases can only be treated safely if they are considered as septic even when they are only suspect. In such cases the peritoneum must be jealously guarded from infection, and the whole uterus had better be removed, if the operation can be undertaken in suitable surroundings. In unsuitable surroundings craniotomy must still be resorted to. We may hope in time to relegate the operation of craniotomy on the living child to its place among the obsolete barbarities of the past, to which it has been compared by some authorities, and all will rejoice when that day comes. In the meantime, however, facts must be dealt with, and in cases where the risk to the mother is minimised by the operation of craniotomy we must not hesitate to resort to this procedure. Such cases will certainly occur from time to time in general practice.

The Progress of Anæsthetics.

WE do not remember a meeting of the British Association in which so many problems of the highest scientific import were introduced under what may be called their popular aspects, and the manner in which this was done is a clear proof that the national education in science, so profoundly hoped for by medical men, is really now proceeding. Many of the papers in the different sections invite medical discussion, as might have been expected, now that the boundaries of scientific medicine are so indefinitely enlarged, but none, perhaps, concerns our readers, the practising medical profession, more closely than the third interim report of the committee appointed some time back by the British Association to investigate the problems of anæsthesia. The committee consists of Dr. A. D. WALLER (chairman), Sir FREDERIC HEWITT (secretary), Dr. J. BLUMFELD, Mr. J. A. GARDNER, and Dr. G. A. BUCKMASTER, and its report deals with the commonly accepted principles which control the administration of ether as a general anæsthetic by inhalation. This subject fell within the purview of one of the preceding reports and has occupied the members of the committee during the past year. An attempt was made, which proved successful, to obtain evidence as to whether a 10 per cent. vapour of ether, when given by inhalation, would be competent to ensure anæsthesia. It will be remembered that this strength of vapour in air given to the lower animals in the laboratory by a continuous method gave satisfactory results. In an appendix to the report the matter is carried further. Ether presented by an open method—i.e., dropped continuously upon an absorbent material and approximated to the face—was studied. The maximum strength of the vapour so produced in the ordinary course of the induction and maintenance of surgical anæsthesia was found in one observation to be 20 per cent. This maximum fell during the continuance of the administration as the result, we are told, of evaporation and cooling. In a second observation the percentage was found to be 14·6 after an interval of two minutes, and 11·6 after 24 minutes. A third observation gave a percentage of 9·2 after 16 minutes; while in a fourth case subsequently to a 12 minutes' inhalation the percentage strength of the ether was estimated to be 9·7. In this case an attempt was made to increase the percentage to above 12, but this was found to be impossible by the means adopted—viz., adding excess of ether. The points which this interesting research appears

to enforce are that the method of giving ether by an "open" system, while it induces adequate anæsthesia for human beings, yet automatically keeps the strength of the vapour within the limit adopted by the committee as being safe—10 per cent. The history of ether administration reveals curious oscillations of fashion. In its initial trials as an anæsthetic, besides the attempts made to supply a vapour by means of the crudest of inhalers, a quasi open plan was adopted, but proved unsatisfactory, owing to the fact that no attempt was made to attenuate the strength of the vapour supplied, with the result that distressing sensations of strangulation arose and dangers occurred incident to the wild struggles of the unfortunate patient. On the continent, where a modified open method is much in vogue, such as that adopted by Dr. DUMONT of Berne, enormous quantities of the anæsthetic are used, and the patients appear in many instances to be liable to post-anæsthetic dangers such as pulmonary or renal catarrh.

The plans so popular in England at the present time, which are based upon those introduced from the United States, are less open to adverse criticism. They avoid the deleterious addition of an impervious cover to the mask, and permit free through-breathing, thus ensuring evaporation and the automatic adjustment of the strength of the vapour inhaled. Again, in frequent cases the plan is adopted, the importance of which has been insisted upon by so many of the continental surgeons, of systematic dropping applied to the ether supply instead of the douching in bulk, which is at once wasteful and open to a charge of producing grave consequences. Sir FREDERIC HEWITT, in one of the appendices, deals with the subject of open ether, and his experience of it has led him to eulogise the method; indeed, he appears to regard it as superior to others involving the employment of closed inhalers such as those due to Clover, Ormsby, and the countless modifications of these types. The simplicity of the procedure commends itself to all who have acquired the technique, and those who extol it appear to believe that the incidence of danger to life during its use is not greater than is inherent to the performance of severe surgical operations upon patients in a condition of physical collapse. This point cannot be decided so far, nor must too much importance be attached to the distress which many patients experience as the result of the clinging and persistent odour which prolonged ether inhalation leaves behind it. It is perhaps premature as yet to accept the view enunciated that ether will as a result of the improved methods of its use wholly supersede chloroform in surgical anæsthesia. We may well suppose that many will take a more conservative line, and while advocating a wider adoption of ether in surgery will yet regard chloroform as possessing merits all its own which single out that anæsthetic as ideal in certain circumstances. The report and some of its appendices, indeed, deal with chloroform and reaffirm its comparative safety when employed by scientific and precise methods. The researches of SNOW, and later of PAUL BERT, initiated the dosimetric method of giving chloroform vapour, and established by experiment and clinical observation that there exists a limit of safety—a 2 per cent. vapour of chloroform in air. Their researches have been elaborated recently by Dr. A. D. WALLER, by the Special Chloroform Committee of the British Medical Association, whose report has been lately published, and by others. In the report before us we learn that the balance chloroform inhaler, the invention of Dr. WALLER, which supplies an exact dosage, has been adopted in the practice of St. George's Hospital, and experience with it has further shown the safety of a 2 per cent. vapour, while it has supplied a valuable means of teaching students the principles of dosimetry as applied to anæsthetics.

Mr. A. G. VERNON HARCOURT, the inventor of the well-known dosimetric chloroform inhaler which has been so widely used with good results, read a paper before the British Association during its recent meeting, and pointed out that the inhaler which he has perfected, while being simple and portable, fulfils its primary object—namely, to supply and control a chloroform and air mixture of definite percentage value. We do not deal in this place with the technical details of Mr. VERNON HARCOURT'S discourse, although it repays careful study. Whether or not we admit that the last word has been said upon the *quæstio vexata*, Is ether or is chloroform to be adopted to the exclusion of the other? and, again, whether the dosimetric methods eulogised in the present report are final or tentative, none will gainsay the fact that public opinion is being rapidly aroused to the importance of the questions which have been mooted. Anæsthetics to-day are needed so constantly and so imperatively that it is essential that the public should be safeguarded. It is of no avail to perfect methods unless the public are made aware that safety lies not in their individual ability "to take an anæsthetic well," but in the ability of the administrator to give it well. Nor can such a thing be possible in the case of all and sundry. By dint of careful teaching and opportunities of constant practice medical men acquire this power, and it is to the interest of the public both that the education of our medical students should be perfected in this regard, and that this procedure of surgery should be restricted to those who possess adequate and recognised surgical and medical qualifications, at least when the graver procedures of surgery are in question. Every thoughtful person will agree that all unqualified practice is an evil, especially to the public at large, but this evil becomes greatly accentuated when the unqualified practitioner employs such powerful drugs as fall within the armamentarium of the anæsthetist. Various attempts at legislation upon this subject have been made, and now a draft Bill has been lodged at the Home Office to the terms of which there seems a general consensus of professional and official agreement. We may well hope that not only the administration of anæsthetics, but other departments of the healing art will in the near future receive more protection, since the legislation required is aimed not at safeguarding the pockets of the medical profession but at protecting the public—all of them, and not only the poor and ignorant—from the perils of unqualified practice.

Annotations.

"Ne quid nimis."

THE ANOMALIES OF PLAGUE INCIDENCE IN INDIA.

SOME attention has already been drawn to the anomalies of the present incidence of plague in India. When the disease was imported into that country from China in 1896 it spread rapidly, being conveyed, as our readers are aware, from the port of Bombay by refugees and others into the neighbouring provinces and native states, ultimately extending over vast tracts of the empire. While the infection spread like wildfire in some provinces, in others it only smouldered, as it were, never assuming what might be regarded as epidemic proportions; while yet in other provinces plague, though introduced time after time, never seemed to gain a foothold, nothing more serious than a few sporadic cases being reported. The main brunt of the plague incidence in India has been borne by three provinces—namely, the Punjab, Bombay, and the United Provinces of Agra and Oudh, which together have a combined population of about 97 millions—that is, roughly speaking, about a third of the whole population of India (calculated on the Census of 1901). In the three provinces during the last 15½ years, from 1896 up to the middle of 1911, no fewer than 5,435,266 deaths from plague have been registered. This number, however, is probably below the actual reality as, for various reasons, deaths from plague are known to have been ascribed, intentionally or otherwise, by the natives to other causes. As compared with these figures it may be stated that during the same period throughout the whole of India, excluding the three above-named provinces, only 1,942,057 fatal plague cases were certified; so that of the total 7,377,323 deaths from plague recorded in India in the last 15½ years about five-sevenths occurred in the three provinces already mentioned, with about a third of the entire population of the country, the remaining two-sevenths occurring in the rest of India, with some 200 millions of inhabitants. On the other hand, although plague has been persistently present in the Presidency of Madras since 1897, less than 80,000 deaths from this cause have been reported, although the population involved is about 42 millions. If we contrast with this the mortality from plague in the Punjab during the same period, in a population of about half that of the Madras Presidency, we find that there were in it no fewer than 2,436,105 plague deaths. The city of Madras with over half a million inhabitants has had an almost complete freedom from plague since its introduction into India, and though the infection has been imported time after time there has been no spread of the disease in this city. When the case of Eastern Bengal and Assam comes to be considered the contrast is still more marked. This province was constituted in 1905, and has at the present time, according to the Census of 1911, a population of nearly 34 millions. Comparison with other provinces as to plague incidence is limited to a period of six and a half years—that is, from the beginning of 1905 to the middle of 1911. In that period in the new province only 146 plague deaths have been reported, as compared with 1,575,866 in the Punjab with about 10 millions less population; 1,266,186 in the United Provinces with about 13 millions more inhabitants than Eastern Bengal and Assam; and 334,639 plague deaths in the Bombay Presidency, the population of which is more than 10 millions less than that of the new provinces. In the Presidency of Madras, in the six and a half years under consideration, 25,780 plague deaths were recorded, its population being, as has been said, about 42 millions. The causes which have led to this unequal distribution of plague mortality in these provinces of India have so far remained undiscovered. Why, on the one hand, the Punjab should experience such an appalling mortality from plague; why, on the other hand, the Presidency of Madras, with twice the population, should escape with comparatively so small a record of fatal plague; and, above all, why Eastern Bengal and Assam should practically have complete freedom from this epidemic disease, though the infection has been repeatedly imported into it, are problems still unsolved. The investigations of the Indian Plague Advisory Committee, appointed jointly by the India Office, the Royal Society, and the Lister Institute in 1905, have demonstrated already that the spread of bubonic forms of plague, the prevalent type of the disease in India, is brought about through the agency of the rat flea. Rats and fleas, it would seem, are as common in Madras and in Eastern Bengal and Assam as they are in the Punjab or the United Provinces. So far as can be learned the conditions for the spread of plague are much the same in all of these provinces above named. In the circumstances we are glad to hear that the subject has engaged the attention of the Advisory Committee, whose expert representatives have already visited the Presidency of Madras and the Province of Eastern Bengal and Assam to collect information and to inquire, with the help of the respective Sanitary Commissioners and their staffs, into the local conditions which might be thought of as likely to affect the question of the apparent inability of plague infection to spread in one or another place. Perhaps it is justifiable to hope that the information collected in this way by the Advisory Committee may ultimately be found to serve as a basis for devising further measures for arresting the long-continued prevalence of plague in the Punjab and in the other heavily affected provinces, and may in this way lead to the prevention of much human suffering and to the saving of many lives.

ARTIFICIALLY COOLED HOSPITALS.

ONE of the most essential points to be attended to in the construction of a hospital in this climate is the installation of a suitable system of heating. It may be added that the proper working of even the most perfect system that can be devised is very often one of the most difficult matters to settle to the general satisfaction of the inmates. We do not, however, make any methodical endeavour to bring about artificial cooling, though during the present summer there must have been many occasions when such an installation would have been of therapeutic benefit. Dr. Charles E. Woodruff of Manila, in the Philippines, has drawn attention to this subject in *American Medicine* for July last. He refers to the reported case of sleeping sickness treated in a room fitted with a cold storage plant, where the daily stupor was reduced from 23 to less than 19 hours, and states that in a series of cases of dysentery in a tropical hospital improvement took place very slowly, if at all, when the temperature was over 82° F., while when it dropped below 80° there was a marked change for the better; and if it came down below 75° the patients would be soon up and about. The nearer the temperature is to 70° or 68° the better it is for the patient. He points out that the tropical negro is adjusted to a considerable range of temperature, and survives a southern outdoor life in America, but he dies from tuberculosis when taking up indoor house labour in the north. Dr. Woodruff believes that every type of man is fettered by his physique to a very limited environment, and if he is adjusted to cold air then he must have it, or he will in some way deteriorate. Thus,

cold air is good for consumptives of white race belonging to temperate climates. A hot, equable, sunny climate is not so good for such cases as a cold, variable, cloudy one, as is shown by the contrast between the bad results of treatment in the Philippines and the good results obtained in the Adirondack Hills of New York State. All cases cannot, however, be transported to an appropriate climate, so that a proper environment must be provided locally. The cooling of the air of hospitals is a simple matter. All that is needed is a "steam coil" or "radiator," in which circulates cold brine instead of hot water. This does not radiate, it absorbs, heat. According to Dr. Woodruff, all the air needed to ventilate a ward of 12 beds can be cooled from 95° to 55° by an electrically driven apparatus of the capacity known as a "one kilo-watt ammonia compression set," which can be installed on a base 10 feet square. As the coils drip moisture they cannot be put in a ward. Also, the air is damp when it leaves the coils, but it warms up on its way to the ward; or, if needed, can be warmed artificially so as to be delivered dry. The method may be carried out for ordinary dwellings as well as hospitals. Health would be preserved longer, and more work could be done with greater ease, if a northerner living in the tropics could live in and breathe air at a temperature of 55°; and this might be effected if the same expenditure were allowed for cooling in the tropics as for warming in cold temperate regions. It may be some years before in these islands we get a recurrence of the exceptional heat of the present summer, but in nearly every year there are spells of sultry weather which are extremely trying to a considerable proportion of hospital patients. The installation of a cold room for suitable cases would be an admirable offering from some wealthy and benevolent person.

DR. CARL SPENGLER'S "I.K." TREATMENT FOR TUBERCULOSIS.

SINCE Professor Koch first introduced tuberculin for the treatment of tuberculosis several modifications of that substance have been made and experimented with. Dr. Carl Spengler, whose researches on the subject are well known, has more recently made trial of a derivative of Koch's original tuberculin which he has named "I.K." We have received a communication from Dr. H. W. Godfrey containing an interesting *résumé* of Dr. Spengler's investigations and also the results of his own experience with this remedy. Dr. Godfrey explains the various steps which finally enabled Dr. Spengler to form "I.K.," and further states that it is a clear solution rendered durable by the addition of carbolic acid and sodium chloride solution. It has a two-fold action—antitoxic, which neutralises the poisons produced by the bacillus, and is therefore, directly antifebrile; and secondly, a lytic or bactericidal action. Dr. Godfrey has treated several patients with "I.K.," and sums up his conclusions thus: "One of the first effects of the I.K. treatment is an improvement in the subjective condition of the patient, he feels better, the breathing is easier, and as a rule the appetite is improved and weight gained, there is a decrease in the rhonchi audible, and the sputum after a few injections is lessened, though at first it may temporarily increase, and the temperature falls in some instances rapidly." Dr. Godfrey then proceeds to give brief notes of the cases of eight patients whom he had treated by this remedy. His results are rather startling. At the termination of the course of treatment all the patients were either in "perfect health," "perfectly well," or "quite as well as usual," and one had been "medically examined for insurance and accepted." He does not state whether "I.K." had been tried in other of his cases with less wonderfully good progress We are moved, however, to point out that this preparation has been tried by competent observers who have entirely failed to obtain the results claimed by Dr. Splengler and Dr. Godfrey. There is nothing more fallacious than to judge of any treatment for pulmonary tuberculosis which has only been tried in a few cases. A very large number of recorded instances are required before any definite conclusion can be arrived at; and, further, the preparation must be used by numerous physicians and their results carefully compared. The pupils and friends of Dr. Spengler have recently published a collection of his writings as a presentation to him on his fiftieth birthday. Several articles appear in this volume which have not been previously published, and the whole forms interesting reading and a valuable addition to the present knowledge on tuberculosis and syphilis, though we ask our readers to receive the results of employing "I.K." with reserve for the present.

A MUCH STUDIED PEOPLE.

IT is necessary to go back but very few years in the literature of Egyptology to appreciate the extraordinary revolution which has taken place recently in our knowledge of the people who lived and fought, who built temples and raised monuments, and finally died and were embalmed in ancient Egypt. But a very little while back anyone who desired to gather information concerning the actual physical remains of the ancient Egyptians would have found in the literature little save the records of the examination of individual mummies and the comparison of the findings with the accounts of embalming as given by Herodotus and by Diodorus Siculus. To-day it is very different: an extensive and specialised literature has sprung up, a vast amount of work has been done, and all the search-lights of modern medical science have been turned on the ancient dead of Egypt and Nubia. With most of these more modern studies we have already dealt in our columns, but it would seem that the time has arrived when some inventory might be taken of our knowledge of the people whose remains, though now the subjects of scientific medical inquiry, have so long been reserved merely for mysterious speculations or museum curiosity. The scientific study of the mummy has ever been in the hands of medical men, and it may be said with truth that it has been the medical man, and not the professed Egyptologist, who has learned the secrets of the arts of embalming as practised in ancient Egypt, and who has given us trustworthy data concerning the physical condition of the embalmed. More than 200 years ago Greenhill wrote his "Art of Embalming" and established himself as an authority on mummies. In his train there followed a number of members of the medical profession. In 1825 Dr. A. B. Granville wrote his "Essay on Egyptian Mummies," and nine years afterwards Dr. T. J. Pettigrew published a work which is a monument of accurate observation. Dr. Pettigrew's "History of Egyptian Mummies" reached the high-water mark of researches on the methods of embalmers; for several years no additions were made to real knowledge; and many who essayed the task fell into grave errors which Dr. Pettigrew had avoided. The modern period of research dates no further back than the last 15 years or so, when Professor Alexander Macalister showed the methods by which the physical characters and the mode of preparation of mummies might be studied according to the requirements of modern science. Since then the study of the mummy has made extraordinary progress. Professor G. Elliot Smith and his co-workers in Egypt and Nubia have enormously elaborated methods and perfected research, and by the examination of a vast amount of material have placed our knowledge of the methods of embalming employed at different historical

periods upon a very sound basis. The study of the mummy as an embalmed corpse is well-nigh perfect; so perfect that a high degree of specialisation has of necessity arisen among later workers. The chemistry of the mummy, and of the embalming substances, has been repeatedly dealt with in recent years by Mr. A. Lucas and Dr. W. A. Schmidt of Cairo, and by Dr. Paul Haas and others elsewhere. The gross manifestations of disease as displayed in the bones and the shrunken soft tissues have been fully described by Professor Elliot Smith, Dr. F. Wood-Jones and Dr. Douglas E. Derry in the reports and bulletins of the Nubian Survey. We have already noted in our columns the advent of these stages in the progress of the study of the mummy, and now a later phase is added, for the tissues of these ancient dead have been rendered amenable to the ordinary processes of microscopical examination and have been made to yield up further secrets. Dr. Marc Armand Ruffer has made this study his own, and by the publication of his "Histological Studies on Egyptian Mummies"[1] has given us a very full account of the microscopical appearance of the tissues of these ancient peoples, even demonstrating the nuclei of cells which have been dead for some 8000 to 12,000 years or so. Despite the many vicissitudes of the corpse, both before and after mummification, a very wonderful degree of preservation of minute structure is present, for striation of the muscular fibres in a meal composed of flesh has been detected in the intestine of an individual who died a thousand years before Christ. These and other astonishing instances of the wonders of preservation of delicate histological structure Dr. Ruffer has made clear, and it must be owned that it is an astonishing thought that not only the nerves themselves, but even the minute arteries supplying them, are capable of being examined as thoroughly in the body of a man dead for thousands of years as in the subject of a post-mortem examination of to-day. As we have already noted, Dr. Ruffer has not confined his researches to normal mummy tissues, but has broken fresh ground in the question of the pathology of the ancient Egyptian. His latest contribution, which is published in conjunction with Professor Elliot Smith,[2] deals with Pott's disease and psoas abscess in a mummy of the XXIst Dynasty, a contribution which marks the antiquity of tuberculosis as a human scourge. Dr. Ruffer has struck a profitable line of research in this the last development of the study of the mummy; much material awaits him, and great issues may be at stake.

THE LIQUOR TRADE IN SOUTHERN NIGERIA.

IT will be in the recollection of our readers that, in consequence of the alarming statements which have been made in certain quarters regarding the increase of alcoholism in Nigeria, the Government submitted the whole question to a committee of inquiry, whose report, published a few months ago, gave rise at the time to a good deal of acrimonious criticism. The committee, while finding that the extent of the evil had been somewhat exaggerated, admitted that the increase of drinking amongst the natives was a very real and growing danger. Since then the various missionary and temperance organisations interested in the question have pressed on the Government the need of more energetic action in the matter, and the Secretary of State for the Colonies has recently been waited on by an influential deputation from the Native Races and the Liquor Traffic United Committee, who laid these views before him. Finding that there has been some misunderstanding as to his reply, Mr. Harcourt has communicated to the press a full report of the proceedings, from which we are glad to observe that it is the intention of the Government to put forward strong and drastic proposals for dealing with the whole problem of alcoholism in native races at the International Conference on this question which is to assemble at Brussels next month. With regard to the particular case of Southern Nigeria, Mr. Harcourt was able to give a reassuring reply concerning some, at all events, of the matters which had given rise to anxiety. He was able, for instance, to show that the increased importation of spirits into the country did not mean a larger consumption of alcohol, the strength of the liquor imported having been materially reduced by the establishment of graduated duties differentiating against the more highly alcoholised spirits. The figures which he quoted may be of interest to the advocates of very high taxation as a remedy for intemperance, for it appears that in Nigeria a duty on spirits which amounts to 200 per cent. of their value has not prevented the steady increase of the imports. In this connexion it has, of course, to be remembered that the contact of the native population with industrial Europe is becoming more and more intimate, with the necessary results that the opportunities and the examples of alcoholic excess are multiplied. It is satisfactory to know that the responsible authorities realise to the full the importance of this question, for even those who are least in sympathy with teetotal views will be prepared to agree that the African negro must be protected from the abuse—as he is incapable of the use—of distilled spirits.

THE TUBERCULIN TEST IN CATTLE.

IN the *Illinois State Register* of August 9th, the views of Dr. James A. Egan, the secretary of the Illinois State Board of Health, are stated in regard to the use of the tuberculin test in cows. Dr. Egan commences by conceding that when intelligently and properly applied by a person skilled in its use, and with a working knowledge of diseases of cattle, the test is one of the best means of diagnosing tuberculosis in cows, but he affirms that he is opposed to its indiscriminate application. His chief objections are that it is positive in the presence of the slightest infections which may never spread to the udder, and that it may, on the other hand, be negative and fail to disclose a case of generalised tuberculosis in which tubercle bacilli are being passed in the milk. He is therefore of opinion that dependence on this test may lull authorities and the public into a sense of false security, and he urges the wisdom of examination by competent veterinarians to discover disease, to enforce cleanliness, and to order the segregation of animals clinically tuberculous or with suspicious abnormality of the udders. A large amount of evidence has now accumulated in regard to the uses and limitations of the tuberculin test both in man and animals. It is generally recognised that the test may be negative in miliary tuberculosis, in advanced cases, and in tuberculous meningitis, and that it may be positive in quiescent or clinically inactive lesions. It is, moreover, obviously inapplicable when there is fever. In spite of these limitations it is a useful test, and, according to Mohler in a Bulletin presented to the Public Health and Marine Hospital Service of the United States in 1908, it affords accurate diagnosis in 97 per cent. of cases in cattle. We agree with Dr. Egan that it would be unwise to rely upon this test only and we endorse his plea for intelligent and skilled examination of the cows as well, but if the test were carried out by competent veterinarians this would be ensured. We do not agree that the physical examination should alone be relied on to the exclusion of the tuberculin test or that only clinically tuberculous cows should be excluded. The ultimate object of hygienic measures in regard to the milk-supply is the eradication of the disease, and it is generally admitted that

[1] Mémoires présentés à l'Institut Egyptien, tome vi., fasc. iii.
[2] Zur historischen Biologie der Krankheitserreger, Part 3, 1910.

this is not easy to recognise in cattle in the early stages by physical examination only. It is also important to note that the experiments of the Royal Commission on Human and Animal Tuberculosis proved that bacilli may be present in the milk of cows with tuberculosis but showing no evidence of disease of the udders.

MR. B. TILLETT AND THE MEDICAL PROFESSION.

THE newspapers of Sept. 8th will be found to contain a full report of a somewhat stormy meeting of the Trades Union Congress, at which certain resolutions were moved connected with proposed amendments of the National Insurance Bill. These included a demand for "a medical court to deal with and punish medical officers for misconduct, neglect of duty, or excessive charges." Ostensibly seconding these resolutions, Mr. B. Tillett, well known as a labour leader in connexion with disputes affecting dock labourers, made an attack upon the medical profession which, we believe, few of his followers in their saner moments would hesitate to condemn. Apparently Mr. Tillett desired to express and to emphasise his apprehension lest under Mr. Lloyd George's scheme the medical man should corruptly declare men fit for work who were in fact unfit. He is reported as having said that: "Now the doctor was brought in, with the result that the employer could pay more to the doctor, and could buy up the scientific genius of the medical profession with more facility than he could buy up the lawyers. Whatever one might say against the legal profession in its unscrupulousness should be multiplied in referring to the doctors. They had had hundreds of cases where a doctor had sworn against his own knowledge and there had been no court to remove him from his position. Men had been pronounced thoroughly fit for work, and they died within a day or a week of the pronouncement. Medical officers were in the pay of firms, and they prescribed according to their payment." More of this sort of trash will be found in the papers (we quote from the *Daily Telegraph*), but it need hardly be repeated here, and it is scarcely necessary to point out that what has been cited is on the face of it absurd. If out of the "hundreds of cases" referred to any one example had been susceptible of proof there would have been no difficulty in discovering a court with ample power to "remove" the "doctor who had sworn against his own knowledge" by imprisoning him for perjury. If a man "pronounced thoroughly fit for work" goes back to work and dies next day or within a week, there is, in the discretion of the coroner, ground for an inquest, as the case in such circumstances must come suspiciously near to one of "sudden death whereof the cause is unknown." If medical officers "prescribe according to their payment," Mr. Tillett has no reason to quarrel with the provision whereby patients under the Bill are to choose their own medical attendants. However, there is no need to labour the matter. The working classes, as a whole, are not likely to deny their debt to the medical profession. The work done by it for them has been openly and indisputably charitable where it has been done in, and in connexion with, the voluntary hospitals. It has been less admittedly and ostensibly charitable, but none the less so in fact, where it has been performed with little or no hope of payment under the guise of private practice among the poor. It has been done by members of a profession, who, in acquiring the skill and knowledge which qualify them to practise, have expended money and worked for many years without being able to earn a penny at an age at which the working man's son is supporting himself in independence. It has been the work of a profession which has made no claim for an eight hours day, or for "time and a half" payment for "overtime," but has been, and is, at the beck and call of the sick and suffering during the night as during the day. Mr. Tillett has no reason to be proud of the use that he made of his unquestionable talent for public speaking upon the occasion to which we have referred.

LEAD POISONING FROM GUNSHOT WOUNDS.

IT is remarkable that among the many cases of gunshot wounds in which projectiles were retained in the tissues very few cases of lead poisoning have been observed. The subject appears to have first received attention in the sixteenth century from Ambroise Paré, who noted the innocuity of leaden projectiles retained in the tissues, and to explain it drew a parallel with the healing effect of lead on ulcers. At a recent meeting of the Société Médicale des Hôpitaux of Paris M. Ribierre and M. Flandin reported the following case. A stone sawyer, aged 26 years, was admitted into the Cochin Hospital under the care of Professor Chauffard on May 15th, 1911. In 1903, while in Algeria, he suffered from malaria. On returning to France he had three or four attacks in 1904. He never suffered from syphilis. In July, 1910, he attempted suicide with a fowling-piece charged with No. 6 shot, which entered a little below the right nipple and passed through the chest and the scapula to the wound of exit. The immediate result did not appear to have been serious, but hæmoptysis took place for a fortnight. From the wounds of entrance and exit reddish serum and then pus discharged. After a month there remained only a sinus in the back, from which ten shot were discharged. Three months after the attempt he was seized with violent colic, bilious vomiting and obstinate constipation. The colic continued for two or three weeks and was followed by jaundice with decolouration of the fæces which lasted a month. A fortnight later—six months before admission—paralysis began. When he tried to get up his legs gave way, and his arms were so weak that he could with difficulty carry a glass to his lips. In a few days the arms were completely paralysed and a little later the legs. He remained in bed completely immobilised for three months. Under massage he regained some power in the legs and more slowly in the arms. On examination the deltoid, triceps, and biceps were atrophied but not paralysed. The flexors of the forearm were atrophied, but contracted feebly. The extensors of the wrists and fingers were completely paralysed. The muscles of the lower limbs were weak and atrophied, but he could walk easily. The patellar and tendo Achillis reflexes were diminished. There was no line on the gums. At the wound of exit there was a sinus from which a little seropus trickled. Radioscopy showed numerous particles of lead beneath the right scapula, which moved with this bone, and others, smaller and less numerous and deeper, which moved with respiration and were certainly situated in the lung. The surrounding lung for the distance of a finger-breadth gave a shadow. Blood examination showed 3,399,000 red corpuscles and 12,600 white corpuscles per cubic millimetre, of which 67 per cent. were polynuclear. Lead could not be found in the urine by electrolytic examination, but on treating pus from the sinus with ammonium sulphide blackish-grey granules were observed in all the leucocytes. Under sulphurous baths and galvanisation of the muscles of the upper limbs marked improvement took place, but drop-wrist persisted. It seems that the cartridge used by the patient contained about 250 shot, weighing together 30 grammes. He said that not more than 20 shot were discharged from the sinus. In view of the improvement operation was not thought advisable, but recurrence of intoxication may render it necessary at a future time. Only seven cases of plumbism due to retained leaden projectiles appear to have been

recorded, all by French and German writers. The first was reported by Bronvin.[1] A child, aged 13 years, received in the right hand the charge of a fowling-piece. Two shot were immediately extracted from the wound. Suppuration followed and the wound healed in seven weeks. Shot could be felt beneath the scar. Eight weeks after the accident there were intense colic, obstinate constipation, and a blue line on the gums. Two more shot were extracted, but attacks of colic continued for more than a month, after which recovery took place. Kuster and Lewin have reported the case of a German officer who was shot in the right knee during the war of 1870.[2] The bullet was not extracted, and during the following eighteen years he complained only of pains in the knee. In January, 1888, he began to suffer from attacks of colic with constipation, anæmia, jaundice, and tremor of the hands. There was a blue line on the gums which disappeared from time to time, and lead was found in the urine. At the end of a year the tibia was trephined, andextending from the periosteum to the marrow tracks of little blackish-blue masses were found. After removal of these recovery gradually took place.

UNVENTILATED BEDROOMS.

IN an exhaustive report on the sanitary condition of Hackney for the year 1910 Dr. J. King Warry, medical officer of health of the district, has an interesting and suggestive note upon the frequent use of inadequate rooms as sleeping-places in the small flats which compose what are known as "tenement houses." According to what he has observed in the borough there are in many tenements, not otherwise ill-built or defective, tiny chambers intended presumably for bedrooms, but corresponding in structure to "a ventilated and lighted box-room." They are small, lighted by an ordinary sash window, and provided with a hole in the wall about six inches square which is guarded outside by a grating, but they have no fireplace. In Dr. Warry's experience one of these closets was used by a small boy suffering from measles, and his mother, after stopping up the hole in the wall, had lit an oil-stove in order to provide warmth. This case, it is pointed out, illustrates the need for a fireplace and chimney if such rooms are to be made use of for living purposes. On other occasions Dr. Warry found that one or more of the children of a family were assigned a room of the kind described as a sleeping-place, and that the blocking of the ventilating hole was a frequent practice. He has endeavoured to discover any legal means for discouraging the construction of such rooms, but does not find that he is assisted by any Building Act or other statute or regulation. All will agree that the matter is of some importance, particularly as inadequate accommodation such as that described is usually assigned to children or to a servant, usually a young girl, where one is kept. In this connexion, however, it may be mentioned that the provision of ill-ventilated and insanitary sleeping-rooms for members of the household whose position precludes them from protesting is not confined to tenement dwellings built for the working poor. In many comparatively important and otherwise ostentatious flats the servants' bedroom is wholly unfitted for its purpose, and although its air space and means of ventilation would be insufficient for one occupant it is often made to serve for two. They do not complain; domestic servants do not "strike" against stuffy, dark, and insanitary sleeping rooms with a tiny and perhaps equally gloomy kitchen to sit in, but want of knowledge and foresight on the part of those who have built flats and small houses is probably responsible for a great deal of the difficulty which their tenants find in obtaining and keeping for any long period servants of a decent class. The question of sleeping accommodation so far as it affects servants seems to us, however, to be a matter for the consideration of employers, at any rate, so far as these are of the "upper" and "middle" classes, rather than for legislation. With regard to the homes of the working-classes, including those which have been built since the serious consideration of sanitation and hygiene has occupied the legislature, it must be borne in mind that the undesirable conditions, to which we have at times drawn attention, are not entirely due to defects or to omissions of a possibly intentional character in Acts of Parliament. Rooms built with provision for ventilation, frequently are rendered useless by the deliberate action of their occupiers. The ventilating holes certainly might be increased in numbers or size in small rooms and fire-places with chimney flues might be added, but we hardly conceive that the tenants would, or could, afford fires as a rule in their children's sleeping rooms, and a flue regarded as a ventilating shaft only is just as easily blocked as a hole in the wall. Indeed, the closing of unused chimney flues is a practice not confined to the working classes, if it exists generally among them. What is required is a wider recognition of the advantage or necessity of fresh air as conducing to health, a recognition which is increasing, and which we have no doubt will become more general as children educated in modern schools grow up.

[1] Union Médicale, 1867, No. 3, p. 89.
[2] Archiv für Klinische Chirurgie, 1882, Band xliii.

THE TREATMENT OF CONSTIPATION.

IN another column we publish an article by Sir James Sawyer drawing attention to certain points in the treatment of constipation. There is now a tendency to at once proceed to the administration of drugs when dealing with cases of chronic constipation, and to rely on their action alone rather than to bring into force those provisions which nature supplies. Various old therapeutic measures are apt to be lost sight of, and medicaments are substituted for them which sometimes tend to increase the evil rather than remedy it. To "solicit a daily evacuation of the bowels," as the late Sir Andrew Clark was wont to impress upon his patients, is certainly a useful maxim which is likely to be neglected in the daily busy rush of a business man's life; nevertheless, as Sir James Sawyer observes, by long-continued habit in health the act of voiding fæces can become to some extent a rhythmical process, performed at a fixed time by an acquired periodicity each 24 hours. It will be generally acknowledged that before prescribing drugs every care should be taken to inquire carefully into each patient's daily mode of life, so as to endeavour as far as possible to produce the desired effect by habit, diet, or simple mechanical means, such as physical exercises or massage. Sir James Sawyer rightly urges that no case of habitual constipation can be treated by "rule of thumb," and if drugs are resorted to, it is wise to vary the remedy occasionally, as frequently a patient appears to become immune to the action of one particular laxative or purgative. However, there are exceptions, and occasionally a case occurs of the same combination of drugs being satisfactorily used for many years without any change in the prescription. A similar principle here exists as in the treatment of other maladies. A study of the personality and possible idiosyncrasies of each patient must be observed, for it is only by a due perception of every circumstance that successful treatment ensues. Neither Sir James Sawyer's teaching nor our comment contains a word which is not well known to all medical men, but the main lesson to be drawn is rather for the public than for the medical profession. The public in increasing numbers love to change their regular medical attendant for some one

who is supposed to be "good" at this, that, or the other class of case. It wants to be impressed upon them that a prolonged and detailed acquaintance with a patient has a diagnostic value "in all things great and small."

THE ETIOLOGY OF BERI-BERI.

THERE is probably no disease concerning which so much discussion as to its etiology has taken place as beri-beri. In the elucidation of the mystery concerning it, Dr. Henry Fraser and Dr. A. T. Stanton of the Malay States have just published the results of an extremely painstaking and exhaustive research, and it would seem opportune to draw attention to the many hypotheses concerning its nature (p. 828). They, as will be seen, are various and conflicting; some which would appear to be convincing from the positive nature of the data on which they rest, are succeeded by others resting on equally valid grounds. The late Dr. Kynsey, formerly Inspector-General of Civil Hospitals, Ceylon, held that one form of the disease was due to the presence of ankylostoma, and possibly also of trichocephalus dispar, the effect of these worms accounting for the anæmia present in the disease.[1] The germ theory has been invoked; thus Pekelharing and Winkle claimed to have discovered a specific bacterium; H. V. Dangerfield of Réunion also described a bacterium having five stages of evolution—namely, a hemispherical, a diplococcic, a micrococcic, a zooglœic, and, finally, a sporulating form; Ogata in Japan isolated his kakke coccus, whilst later Tsukuki announced the discovery of the specific diplococcus of the disease. Then we have Manson's theory that the disease is produced by a toxin from a germ whose nidus is outside the body. He aptly compares the position with that of alcoholism thus: In the case of alcohol the germ is the yeast plant; the nidus solutions of sugar; the toxin the alcohol; and the pathological effect a peripheral neuritis. In beri-beri the saprophyte produces a toxin; the nidus is the soil or surroundings; the man is poisoned, and as a pathological effect suffers from a peripheral neuritis. A striking example in favour of this theory was furnished in 1895 by Dr. Travers at Kuala Lumpur. Here there were two jails. In the old one the disease had not appeared, but after a new additional jail had been built an extensive epidemic arose in it. The rice supplied to both jails was the same. On transferring the sick from the new jail to the old one they rapidly recovered. The late Dr. Norman Chevers held the view that has been followed and amplified by Dr. Hamilton Wright. They hold the disease is consequent on a bacillus being taken into the human organism with the food; after incubating for about ten days a specific duodenitis is produced, and from this the nerve poison is developed. Wright states this affection of the duodenum always shows itself at the commencement of the illness. Yet another hypothesis lays the blame on certain metallic elements. Amongst these may be mentioned arsenic and oxalate of potassium; whilst recently Staff-Surgeon A. J. Laurie, from his experience on the *Sphinx*, incriminates copper. Lastly, we come to the hypotheses connected with the diet, and it is with these hypotheses that the most convincing work has been done. Some hold that the disease is due to a deficiency of fat in the diet. Dr. Brémand showed how an epidemic at Poulo Condor ceased suddenly under the influence of a regimen containing fat pork. A most convincing theory, however, is that connected with the deficiency of nitrogen in the food. Baron Takaki, when surgeon-general of the Imperial Navy of Japan, furnished a most striking proof of this factor, and by his ordinances seems to have eradicated the disease from that navy. In 1880 he noticed the great disproportion between the number of cases occurring in warships and those in barracks, and thought this might be due to the difference in the food on board ship and on shore. He held that in the naval dietary there was an excess of carbohydrates and a deficiency of proteid. In 1883 the warship *Ryujo* made a voyage of 271 days to New Zealand, and 160 cases of beri-beri occurred out of 350 *personnel*. By his influence the ship *Taukuba* made the same voyage under the same conditions, but with an improved dietary, avoiding the excessive use of rice. The *personnel* in number were about the same. The result was that only 16 cases of the disease occurred. This significant result was followed by elimination of the disease from the Japanese navy, so that during the war with Russia it was free from it, although the army suffered considerably. Comparing now the ratio of the disease in the Japanese navy in different years: in 1882 the ratio per cent. was 40·45; in 1889 it was 0·03. The latest researches in regard to the food factor have just been published by Dr. Fraser and Dr. Stanton; much of the work has already appeared in our columns, but we welcome it in volume form. Their results may not prove that a certain condition of the rice is the *only* cause of beri-beri, but they certainly do prove it is one cause. They show that white polished rice will cause the disease; that when fowls, on the contrary, are fed on unpolished rice they do not contract the disease; and, finally, that if the polishings from white polished rice be added to a diet of white polished rice beri-beri does not result. This experience is confirmed by that found previously in the prisons of Java. In those jails in which white rice was consumed 36 out of 51 were affected; whereas in those using red uncleaned rice only 1 out of 37 jails was attacked. These researches coincide to a great extent with the opinion of Dr. Hébrard, who has just published his views on the disease. We may also mention that in 1896–97, and again in 1906, Professor C. Eykman of the University of Utrecht published the results of his researches into the question of the factor of rice in beri-beri, in which he proved that an extract from rice polishings if added to white polished rice cured sick fowls of polyneuritis. To complete the theories implicating diet as a factor, it may be mentioned that Gelpke incriminates a dried fish infected by a trichina; Grimm, infected fish generally; and Miura, raw fish. These causes, however, can be excluded at Kuala Lumpur, where in 1901 for eight months no fish was included in the diet of the prisoners who during this time contracted the disease.

[1] Dr. Noe found in 74 out of 77 cases the eggs of the Uncinaria americana, and consequently holds that this nematode plays an important part in the etiology of the disease.

THE late Dr. Samuel Gee, whose will has now been proved, left the residue of his estate, amounting to about £20,000, to his daughter for life, with contingent remainder to the Royal College of Physicians of London upon trust, as far as possible, to form a permanent endowment fund for the College.

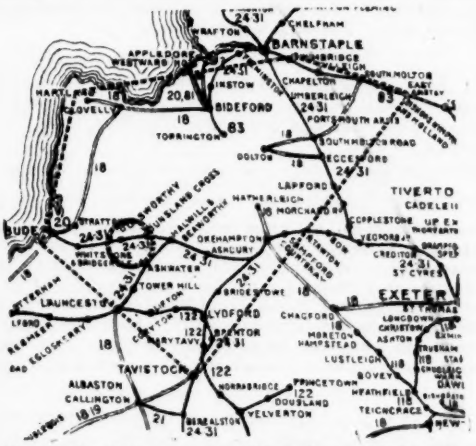
Dr. D. Fraser Harris, lecturer on physiology in the University of Birmingham, has been appointed to the newly founded chair of Physiology at Dalhousie University, Halifax, Nova Scotia.

DEATH OF MR. HORACE NUTT.—Mr. Horace Nutt, who died at his residence, Brooklyn House, Sherborne, Dorset, on Sept. 6th, in his seventy-third year, qualified as M.R.C.S. in 1861 and had been for many years in practice at Sherborne, where he was for a long time medical officer of health. He was also medical officer and public vaccinator of the Sherborne Union, and for the past 35 years has been coroner for the Hundred of Sherborne and Yetminster, an office which carried exceptional justiciary powers. Mr. Nutt was, it is said, the last of the "Liberty Coroners." He was very popular in Sherborne and the neighbourhood.

"SPOTTED FEVER" AND ACUTE POLIOMYELITIS IN DEVON AND CORNWALL.

(FROM A SPECIAL CORRESPONDENT.)

EARLY in August a notice appeared in one of the Devon papers of an outbreak of "spotted fever" in the area around Holsworthy. Later in the same neighbourhood cases were recorded of acute poliomyelitis, and in the public mind some difficulty appears to have arisen in diagnosis. The first cases occurred seemingly some months ago, but little attention was paid to the matter, and, as usually happens, initial neglect has apparently enabled the disease to spread over a wide area of an irregular pentagon in shape. Starting at Bude on the west, the sides pass north and slightly east to Hartland, east and slightly north to Swimbridge, east and slightly south to South Molton, south-west to Tavistock, thence north-west to Bude. At a point within the Bude angle is Holsworthy. The accompanying map is from Townsend's "Western Counties Railway



Map showing (1) the area around Holsworthy; and (2) the area of irregular pentagon shape marked by a dotted line, within which the epidemics have occurred.

Guide," the figures referring to the paging of that guide. There is no direct intercourse between the centres involved, the market towns being in quite different directions.

The Situation at Holsworthy, &c.

Dr. R. J. Reece, a medical officer of the Local Government Board, was sent down by that Board to make a special investigation, and he has held private consultations with local medical officers of health and local health authorities, together with the county medical officer in various centres. The Holsworthy urban council hardly seemed to realise the necessity for taking efficient measures at the onset to prevent an epidemic and the danger of waiting until "one or two doubtful cases" were followed by a widespread outbreak.

At a meeting of the council held on August 8th, after what residents called "the scare in the papers," an animated discussion took place. The medical officer of health, Mr. W. G. Gray, was charged with having given rise to the scare by supplying information to the press, but he denied this. Mr. Gray said that the first case of cerebro-spinal fever (though not recognised as such at the time) took place at Clawton in the first week in May. He described the case and referred to seven other cases. He advised—(1) the distribution of leaflets calling attention to the symptoms of the disease and urging that medical advice be at once sought whenever they were found; (2) compulsory notification; (3) the inspection of all school children before reassembling; (4) official disinfection of all houses and clothing when the disease has died out; (5) the erection of isolation sheds near a cottage that could be used for administrative purposes. Mr. George Adkins, medical officer of health of the county of Devon, who was present, supported the recommendations, as did also Dr. Reece.

In spite, however, of the definite advice of three experts, the resolution in favour of notification was carried only by the casting vote of the chairman. The council declined to make provision for the isolation of cases. After this experience at the urban council, Dr. Reece found it necessary to speak at the meeting of the Holsworthy rural council, held the next day. He told the council it had in its district cases of an infectious disease that killed people. There were probably some thirty cases inside that district alone. The disease extended to at least three other sanitary districts in the neighbourhood, and probably, he believed, more. He did not think that the outer limit had yet been reached. Both cerebro-spinal meningitis and acute poliomyelitis required to be treated as cases of infectious disease—i.e., a disease which should be isolated and contacts disinfected. Sometimes there were one or two cases in a house, no medical man was consulted, and the cases multiplied and assumed a serious aspect. It was not only a direct question of loss of life—about 10 per cent.—but a very considerable proportion of patients were left paralysed, often permanently, and some were deprived of speech, hearing, or sight. It was as important, he said, to notify minor cases as it was the more severe ones.

Mr. Gray said that two deaths had been certified as due to cerebro-spinal fever, and there were two other deaths in which the certifying doctor had some doubt. Mr. Gray took further occasion to protest against the unfair treatment meted out to him in charging him with giving out information to the press. In point of fact, he had declined to accede to such a request from a London paper until after his report should be presented to the council. It then became a public document, and copies had been sent in due course to the Local Government Board and the county council. The council adopted notification *nem. con.* On August 10th a labourer, aged 30, died from spotted fever at South Wonford, Thornbury.

Mr. C. C. Brodrick, medical officer of health, at a special meeting of the Tavistock rural council on August 18th, reported two cases of spotted fever in the district; one fatal one near Broadwood Widger and the other on the Launceston side of the district. Spinal fluid from the latter case was sent to Dr. M. H. Gordon at St. Bartholomew's Hospital, who replied that it was undoubtedly a case of spotted fever. It was unanimously resolved to make spotted fever notifiable for six months, and it was decided to obtain a cottage and canvas screens for isolation purposes, and that a printed description of the symptoms of the disease, with instructions how to act, should be circulated among the public. The chairman, the medical officer of health, and the clerk were appointed a subcommittee to carry out this resolution.

Lack of Facilities for Hospital Isolation.

On August 23rd Mr. Gray reported to the Holsworthy rural council that since the last fortnightly meeting altogether eight cases of cerebro-spinal fever and infantile paralysis had been reported. Two had died and a third case would end fatally within 24 hours. The cases were scattered. The origin of the outbreak was unknown. The present isolation cottage was too dilapidated for use. He produced photographs and said that four inches of water stood in the inner room, although it had not rained for a month. The council, however, decided to defer consideration of the question of isolation accommodation for a fortnight.

With reference to this "let-it-slide policy" the *Bideford Gazette* said: "The adjoining districts are vitally affected, and if Holsworthy will not isolate their cases for their own protection it will become the duty of the adjoining authorities, in self defence, to appeal to the Local Government Board to bring the necessary pressure to bear upon them to make them do so for the sake of others."

Unfortunately, Holsworthy is not the only district in Devon where there is no provision for isolation, as appears from an inquest held at Hartland on a man aged 70, who died there on August 31st after a few hours' illness. At 1.30 P.M. he complained of pain in the stomach and a neighbour gave him ginger tea and helped him to bed. He was seen alive at 4, but was dead by 5 P.M. Dr. A. F. Wright said there was recent inflammation at the base of the brain and that turbid fluid came from the cord. He considered that the conditions found were not sufficient to cause such a sudden death. A verdict of "Death from natural causes, syncope," was returned. One of the jury criticised Dr. Wright for having taken a case of poliomyelitis into his own house. The doctor explained that a midwife at a case was seized with the disease, that the people at her lodgings would not take her

back, and, as there was nowhere else she could go, he had turned out of his own house and put the patient in.

As there is no isolation hospital for the Bideford rural district, in which Hartland is situated, the comment of the local paper certainly appears justified:—

> It does seem nothing short of a public scandal that the medical man, because he happens to follow his profession in an isolated place like Hartland, should have to take upon himself the duties which ought to be carried out by the sanitary authority. It is most ungenerous that his kindly and Christian action should be criticised as Dr. Wright was by some of the jury.

Hartland, which is a very small village in the extreme north-west of Devon, has had four other cases of acute poliomyelitis, occurring in a married woman and her three children.

Progress of the Outbreak.—Some Difficulties.

At South Molton a child is reported to have died from spotted fever on August 12th, and a boy, aged 15 years, taken ill on August 28th, died from acute poliomyelitis on August 30th.

At Barnstaple rural council on Sept. 1st Dr. H. C. Jonas, deputy medical officer of health, reported a fatal case of acute anterior poliomyelitis at Swimbridge. The boy, after a visit to South Molton, went on to Exeter, and was there taken so ill that he was carried to the train and taken home to Swimbridge on August 26th, where he died the next day. All the medical men in the district have been notified of this case and contacts have been traced.

It seems impossible at the present date to follow out the progress of the outbreak, many links in the chain are as yet unknown to us. For example, it is not certain that even all the fatal cases are included in this account. Two other difficulties are present; the distances from centre to centre and the absence of suitable isolation accommodation. Measured on the map in a straight line, Holsworthy to South Molton is 26 miles N.E.; to Broadwood Widger, 10 miles S. by E.; to Hartland, 16 miles N. by W.; to Penryn, 56 miles in a straight line S.W.; to South Wonford, Thornbury (Devon), 4 miles N. by E.; Hartland to South Molton, 28 miles E.; Penryn to South Molton, about 80 miles.

At Dartmouth town council on Sept. 4th Dr. J. H. Harris, medical officer of health, recommended that cerebro-spinal fever and acute poliomyelitis should be made notifiable for a year, but Alderman Row said that "that meant fees," so the question was referred to a committee. It is a pity that the council did not adopt the recommendation at once; delay in such matters may probably prove much more serious than "fees." Owing to the presence of poliomyelitis all the schools in certain of the parishes have been closed for one month from Sept. 4th or until notice.

The Question of Isolation Hospitals.

At Bideford rural council on Sept. 5th Dr. L. B. Betts, medical officer of health, reported four cases of infectious acute poliomyelitis from Hartland and one from Woolsery. He advised that a conjoint infectious diseases hospital should be provided by the various authorities in that portion of North Devon, and he reminded them that Dr. Wright at Hartland had had to isolate a patient in his own house. The chairman said the council had discussed the question over and over again. Owing to the scattered nature of the district the provision of a hospital was a difficult matter, as Dr. Reece had appreciated. The port sanitary hospital ship was suggested, but it was almost certain that the port authority would not agree. All the surrounding councils have tried in the past to put off providing isolation hospitals because of the presence of the hospital ship. On two occasions the ship was used to isolate cases from shore, but the port authority decided that they would not allow it again. An emergency committee was appointed, with power to act in case of further need.

Some nine years ago Northam council had a conference with Bideford rural council to arrange, if possible, for the erection of a conjoint isolation hospital, but no agreement could be effected and the matter dropped. The necessity for proper isolation has been pointed out time after time by inspectors from the Local Government Board and by medical officers of health. Now some sort of provision must be made in a hurry to tide over the present emergency or the people will have to be left to shift for themselves, as in the case at Hartland. There is a good isolation hospital belonging to Bideford urban council, and Northam council has a small building which, however, hardly answers modern requirements. Holsworthy seems to be waiting to see if the epidemic will last.

The provision of a conjoint infectious hospital for the Tavistock urban and rural councils has fallen through, as certain details could not be agreed upon. If infectious hospitals are necessary it is incomprehensible why so many local authorities keep postponing the matter. The extensive area comprised in the districts of Tavistock and Holsworthy and Bideford rural district is now face to face with a serious problem which cannot be solved in time to be of real use in preventing the spread of this epidemic outbreak. It is to be hoped that the various councils will at last see the advantage of being prepared beforehand. The Tiverton councils have a conjoint infectious hospital, and other examples are to be found Mr. Gray of Holsworthy recently found himself in a difficult position. A child contracted acute poliomyelitis and the mother was expecting her confinement. There was no means of isolation in the house. The council at their previous meeting had put off providing any isolation accommodation, so Mr. Gray bought a portable shelter on his own responsibility for the woman. The council decided to pay the cost, £15. The child has since died.

Adoption of Notification.

A fresh centre has started at Westward Ho, where it became known on Sept. 6th that a boy, aged 9 years, had poliomyelitis. On Sept. 5th Penryn (Cornwall) town council resolved:—

> That acute poliomyelitis having appeared within the borough, the provisions of the Infectious Disease (Notification) Act, 1889, shall extend to acute poliomyelitis and cerebro-spinal fever.

This resolution will not come into force until Sept. 15th, or at least a fortnight too late. The history of the present outbreak shows clearly the real necessity of making these two diseases permanently notifiable all over the kingdom, and it would be well if the Local Government Board would take steps to do so as soon as possible. Buckfastleigh urban council has proposed to adopt the section permanently. Several other councils have adopted it for six or 12 months.

Outbreaks of Acute Poliomyelitis.

At South Molton rural council on Sept. 8th Mr. H. M. Body, medical officer of health, reported that five cases of poliomyelitis had been notified in the district. The children had not visited or come into contact with any persons connected with other cases. The patients were three miles from one another, and there had not been two cases in any one school. He recommended that persons in contact with the disease should spray their mouth and nose with a solution of permanganate of potash. He stated that it was possible for a person to convey the germs several miles to someone else without himself contracting the disease, which he (Mr. Body) considered might be conveyed through the air.

At a meeting of the Devon county education committee on Sept. 8th Mr. G. Adkins, county medical officer, gave some particulars of the outbreak of acute poliomyelitis in various parts of the county. He had closed 25 schools. The disease was present in 12 out of the 52 districts of the county. There were 80 cases altogether, and 16 deaths had occurred. A great many children were permanently paralysed. One medical man had 35 cases. In reply to a question Mr. Adkins said that three definite cases of spotted fever were known amongst those reported.

FORTY-SEVENTH ANNUAL REPORT OF THE REGISTRAR-GENERAL FOR IRELAND.

NOTWITHSTANDING the dislocation of routine work which is probably inseparable from census taking, the Irish Registrar-General's report for 1910 has appeared with commendable punctuality—little more than six months having elapsed since the close of the year to which it has reference.

Sir William J. Thompson, whose second annual report is the subject of the present notice, and whose interesting review of Irish vital statistics appears in the present issue of THE LANCET, on p. 809, is fortunate in being able to announce a further improvement in the public health.

Although the rates both of natality and mortality were somewhat below those of the preceding year, the birth-rate in 1910 was slightly higher than the decennial average. Irish mortality, expressed in terms of estimated population, was equal to 17·1 per 1000, and was therefore lower than the decennial average by 0·6 per 1000. Only in two of the previous ten years—namely, in 1905 and 1906—had so low a general rate been attained. This result is due to a fall in the fatality from tuberculosis, the deaths from this cause, in 1910, being fewer by 2678 than the number recorded so recently as the year 1904.

Population Estimates.

The difficulty of estimating the population is exceptionally great in Ireland. Of the effect of immigration on the numbers living no record is available, so that the Registrar-General has no alternative but to base his estimates for each year on the balance of births, deaths, and emigrations, the only other definite factor at his disposal being the number of the people at the previous Census. The population of Ireland still continues to decrease. At the Census taken in April, 1911, the population of Ireland was found to be 4,381,951.

Vital Statistics.

In considering local changes of natality and of mortality it must be borne in mind that the populations employed in framing ratios are necessarily the result of estimation, and experience shows the unreliability of such estimates for periods remote from the Census. Accordingly, when the results of the recent enumeration are available, it will probably be found necessary to revise the published rates of marriages, births, and deaths, especially those for the later years of the past decennium. The deaths registered in Ireland last year numbered 74,894, and were equal to 1 in 58·3 of the population, and to a rate of 17·1 per 1000 estimated to be living at the middle of the year. Disregarding ages, the death-rate among females was slightly higher than among males. Of the total deaths about a fifth part occurred in public institutions. Some idea of the local prevalence of poverty in Ireland may be formed from the fact that the proportion of deaths in workhouses was equal to 17 per cent. of the total in the province of Leinster and to 19 per cent. in Munster, whilst it was less than 11 per cent. in the provinces of Ulster and Connaught. In different parts of Ireland mortality varied widely; the rate did not exceed 13·1 per 1000 in county Clare and 13·2 in County Mayo, but in the county borough of Dublin it amounted to 22·4 per 1000. The relatively low mortality among young children, to which we have previously referred as exceptional, has been maintained in the year 1910. From the present report we learn that in Ireland generally the deaths of children aged 0–5 years did not exceed 33·7 per 1000 living at that age, a rate which is not only considerably below the average in England, but is practically identical with the mean rate in "rural England," as shown by the last issued report of the Registrar-General. At subsequent ages the Irish rates are higher than those of the English rural counties, and in some cases exceed the average rates for England and Wales as a whole.

Infantile Mortality.

Ireland still continues to compare favourably with other parts of the United Kingdom in respect of infantile mortality. In the decennium ended 1909 the rate averaged 97 per 1000 births, whilst in the ensuing year it further fell to 95 per 1000. In the "civic unions," which contain the chief towns, the rate was 123 per 1000, and in the remainder of Ireland it was as low as 75·5; and even this low rate exceeded that of the previous year, which had been only 70·9 per 1000. About one-third of the deaths at this early age were caused by wasting diseases, including premature birth, atrophy, and congenital defects. Other chief causes of death were bronchitis and diarrhœal diseases, which accounted for nearly one-fourth of the total mortality.

Occupational Statistics.

The Irish Registrar-General has this advantage over his colleagues in England and Scotland—that he possesses the means of ascertaining the relative mortality in the various social grades of the community. In the present report the familiar table reappears, showing the mortality at several ages experienced by four sections of the Dublin citizens. Although this table relates to one year only, we believe that similar tables have been prepared for a long series of years. We hope, therefore, to see in some future report a summary of the facts for as many years as possible, for such a summary would be instructive as furnishing an approximate measure of the average mortality in the various social grades of a large urban population. From the present table it appears that whilst in the "professional" and "middle" classes, and, indeed, in the artisan and shop-keeping classes also, the mortality was considerably below the average (22·7), it was very high in the "general service" class, being equal to 27·9 per 1000 among hawkers, porters, and labourers.

Principal Causes of Death.

From a table comparing the mortality in the year 1910 with that of the previous year it will be seen that measles, whooping-cough, and scarlet fever were more destructive than before, whilst there was a fall in the mortality from the other common infectious diseases, as well as from pneumonia and bronchitis. No deaths from small-pox have been registered in Ireland since 1907; nevertheless, the returns of recent years show a dangerous falling off in the number of vaccinations. In the year 1909 only 78·3 per cent. of the infants born had been successfully vaccinated by the end of that year. The number of defaulters has steadily increased since 1905. The loss of life from tuberculous disease in the year 1910 was less than in any previous year. The deaths from all forms of the infection numbered 10,016, and corresponded to a rate of 2·29 per 1000 of the population. Six years ago—namely, in 1904—the rate attained its highest point: it was 2·90 per 1000, or 1·1 per 1000 above the English rate for the same period. Of the total deaths from tuberculosis almost three-fourths were due to phthisis, which caused a mortality of 1·72 per 1000. Taking all ages together phthisis would seem to be equally destructive to both sexes, but when the ages at death are examined the differences are found to be considerable. At ages under 20 the loss of life is exceptionally heavy among females, whilst after that age the greatest loss is sustained by the male sex. In Ireland the age of maximum mortality in both sexes is between the twenty-fifth and thirty-fifth year, or at least ten years earlier than in England. From the occupational mortality table for 1910 it appears that phthisis exacts the heaviest death-toll from commercial clerks and petty tradesmen, who succumb to it twice as readily as do members of the professional class. In order, however, to settle the question of relative occupational mortality from this disease the facts for more than a single year will have to be examined.

Campaign against Tuberculosis.

In Ireland a vigorous campaign against tuberculosis is being conducted by the "Women's National Health Association," which was originally founded, and is still presided over, by the Countess of Aberdeen. Reviewing the causes contributory to the success of the movement, the Registrar-General speaks appreciatively of the work of the association. As tending towards the general improvement of the public health, he assigns particular importance to the practice of diffusing simple health instruction among the masses, which has from the first been adopted by the visiting staff. Among the measures thus advocated may be noted the proper ventilation of dwellings, the observance of personal and domestic cleanliness, the selection and cooking of food, the instruction of mothers and children in the essentials of health, the provision of meals for school children, and the home care of consumptive patients. In the advocacy of these measures the association has willing coadjutors in the medical officers of health, possessing as they do exceptional familiarity with the needs and the home life of the very poor. Among other preventive agencies against consumption the Registrar-General speaks highly of the instructive reports he receives periodically from the local registrars, most of whom are medical men, whose intimate knowledge of the local conditions prevailing in widespread and often sparsely peopled districts renders their coöperation of the utmost value. From a large number of these reports the following may be cited. One registrar says that "owing to the spread of knowledge about tuberculosis this disease is practically stamped out in this district. The cases are now seen early; and, thanks to the intelligent coöperation of patients and their friends with regard to fresh air, disposal of sputum, &c., it is generally possible to arrest, if not cure, the disease in the patient, and also to prevent its spreading to other members of the household."

Another registrar reports that "tuberculosis seems to be losing ground in this district." Yet another registrar remarks that "the infectious nature of tuberculosis is now widely recognised, and also its preventability. The people, until recently, bowed their heads to its ravages and said, 'twas the will of God'! They now see that the 'will of God' lies the other way, the way of sunlight, fresh air, cleanliness, and freedom from disease."

Sir William Thompson concludes his able and instructive report with a graceful recognition of the valuable assistance rendered in its preparation by his colleague, Dr. Ninian M. Falkiner.

ASYLUM REPORTS.

Dorset County Asylum (Annual Report for the Year 1910).—The average daily number on the registers at this asylum was, for the year reported on, 856. There were admitted 220 cases, of whom 55 were private cases. There appears again to have been a very high proportion of the maniacal type among the admissions, in the case of women over 60 per cent., and in the case of men almost 50 per cent. The small percentage of cases of the depressed type is in striking contrast to the records of a few years ago. Amongst etiological factors heredity is again in the ascendancy. In the case of the admissions of 1910 there was a percentage of over 50 in which there was evidence of direct or collateral inheritance. Among other factors enumerated in the causation table that of stress takes a prominent position, and Dr. P. W. Macdonald, medical superintendent, points out that when this is considered in relation to the preponderating influence of heredity, there is a fairly sound basis on which to build a hypothesis of the high percentage of mental disease in this county. He adds: "The inference is simple. In the case of the predisposed all and every shade of pressure should be guarded against, because of the danger of an early breakdown, yet when any suggestion is made to the responsible person the suggestion is either disregarded, or as more often happens, grave offence is the result of true and well-meant efforts to save and protect the predisposed from lasting and irretrievable disaster. Such is the present position; and so long as the concealment of facts predominates, there is little hope for a better or clearer understanding of the true and fundamental facts as regards the causation of mental disease." The number of cases discharged was 87, and of these 64 were discharged recovered, being a percentage of 41·02 on the direct admissions. With relation to divorce and insanity, Dr. Macdonald points out that in certain cases patients recovered after very prolonged periods of illness. For instance, in 1910 one case had been under care for five years, a second for six and a half years, a third for nine years, and a fourth for 23 years. Of those discharged recovered 75 per cent. were placed under treatment within three months of the onset of the attack. This is regarded as a striking proof of the change that has occurred in recent times with reference to the public estimation of the home for the treatment of the mentally afflicted. There is no longer a reluctance on the part of those at home to have their relatives placed under the best possible conditions, and if we could only get rid of the absurd and antiquated words which constitute the so-called stigma, mental disease would be talked of and treated as other diseases. The percentage of deaths to the total number under treatment was 7·7. Dr. Macdonald draws attention to the steady and gratifying continuance of the good results of solaria treatment.

Roxburgh, Berwick, and Selkirk District Asylum (Annual Report for the Year ending May 15th, 1911).—The average daily number on the register for the year was 310·3. There were admitted 61 patients, being 9 more than during the previous year, and 4·4 less than the average for the previous ten years. Sixteen admissions had been previously under treatment in this asylum, the periods of absence ranging from 31 years to seven weeks, the average period of absence being seven years. Among the admissions hereditary predisposition was ascertained to exist in 27 cases (44·2 per cent.). The physical condition of the patients admitted was bad in 55·7 per cent., very bad in 14·8 per cent., and good or average in 29·5 per cent. Thirty-two patients were discharged, of whom 21 had recovered. The recoveries as compared with the admissions gave a percentage of 34·4. Of the 21 recoveries 18 were cases in which the disorder had been of less than three months' duration on the patient's admission, and three in which the duration had been from three to six months. The deaths numbered 23, the rate of mortality on the average number on the register being 7·1 per cent. The mean age at death was 63·8, and the average duration of residence in the asylum was six years and nine months, the periods ranging from seven days to 37 years. Post-mortem examinations were made in 91·3 per cent. of the cases.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

City of Birmingham.—The proportion of notified cases of scarlet fever removed to the city hospitals each year from 1900 to 1908 was between 86 and 90 per cent., in 1909 it had fallen to 78 per cent., and in 1910 was 72 per cent. The remaining 28 per cent (some 750 cases) were treated at their homes, the health authorities being in each case satisfied that the patient could be kept in a separate room. Dr. J. Robertson compares the two groups in regard to the occurrence of secondary cases, and concludes that in this respect the results on the whole were as good when the scarlet fever case was treated at home as when he was removed to hospital. The mortality rates for hospital and home patients respectively were 3·3 and 2·1 per cent. When the scarlet fever case has been removed to hospital and the house disinfected it is the practice to allow any school child in the house to return to school after ten days from the date of disinfection. In considering the sufficiency of this interval Dr. Robertson gives the figures for 1910; 287 cases occurred within 28 days of the removal to hospital of the primary cases, of which 253 occurred in the first seven days and 260 in the first ten days, thus leaving 27 cases (or 9·4 per cent.) which began after ten days from the date of the removal. During the year 591 cases of diphtheria were notified, of which 64 were fatal—a fatality not more than half that prevailing in Birmingham from 10 to 15 years ago. The fatality rate among the 351 cases treated at the City Hospital was 9·7, as compared with 12·9 in the remaining cases. Enteric fever was less prevalent in 1910 than in any previous year. Only 73 cases were reported, and the rate of mortality from this disease was 0·03 per 1000, as compared with the corresponding rate of 0·05 for the whole of England and Wales. As in previous years, mussels came under suspicion as the cause of infection of a considerable proportion of the enteric fever cases. In connexion with epidemic diarrhœa Dr. Robertson insists that in addition to infection which may be attributed to the agency of flies "we must not overlook the fact that the whole of the dust in courtyards, on housetops, and on roads in the poorer neighbourhoods is contaminated with organic matter of animal origin, and that this dirt is carried everywhere by air currents, so that clean, or relatively clean, households in one of the congested districts of the city will possibly get cases of diarrhœa through no fault of the householders themselves." The births registered during 1910 were 14,898, and 9439 births were attended by registered midwives. The cases in which midwives advised that medical help should be obtained under the rules of the Central Midwives Board were 674, as compared with 540 (out of 9238 births) in 1909, and 343 (out of 9244 births) in 1908. Special inquiries were made by the midwife visitor where stillbirths were reported. A considerable number were found to be full-time infants not in any way macerated, indicating that possibly with better recognition of the conditions the child might have been born alive. Visits to the homes of consumptive patients have been further developed. At present there are three visitors who devote the whole of their time to this work in the city, and a fourth visitor is shortly to be appointed. There are some 3000 to 4000 houses in which consumptives reside where visiting is considered desirable. The health department administers two sanatoriums—one at Salterly Grange, with 40 beds for early cases, the other at Yardley-road, with 50 beds, for educational

treatment. The experience of the latter shows that care is necessary to avoid frightening patients, who are capable of resuming their employment, from resuming work when they are fit to do so. Several brass-casters in 1910 objecting to the danger of workshop dust sought other occupation and failed to get it, and thus have had to put up with the worse conditions entailed by extreme poverty. A very instructive report by Mr. J. Malcolm, F.R.C.V.S., shows the steps which have been taken to eliminate tuberculosis from particular dairy herds on Professor Bang's method. Fifteen herds supplying Birmingham with milk, numbering 607 cows, were thus being dealt with at the end of 1910, and there is now in Birmingham a recognised supply of tubercle-free milk from tubercle-free cows. So long as consumers are willing to pay a slight increase in price over that of ordinary milk a supply will be provided equal to the demand, and "it would now appear to rest with the public whether the movement is to progress or not." Mr. Malcolm draws attention to the difficulty which at present exists in securing the slaughter of cows with tuberculosis of the udder, and considers that there would be great advantage in the payment of compensation, even if the scale was very small. One of many satisfactory results to be expected from the forthcoming extension of the Birmingham boundaries is that the slaughter-houses at present on the outskirts will be brought under municipal control and be dealt with by qualified meat inspectors in the same way as the slaughter-houses now in the city. It should be added that this report contains some instructive sections relating to house accommodation in Birmingham and the policy which has recently been adopted by the town council in dealing with slum areas.

Metropolitan Borough of St. Marylebone.—Dr. C. Porter comments on the sale of "pasteurised skimmed milk" in the poorer streets of Marylebone direct from the churn at the price of 2*d.* or 2½*d.* a quart. Having ascertained that this milk was unsatisfactory on bacteriological examination, and cautioned the vendor without producing improvement, Dr. Porter arranged for a churn of milk to be seized and the vendor prosecuted under Section 47 of the Public Health (London) Act. The magistrate condemned the milk on the report of the bacteriologist, who found in it enormous numbers of bacteria, including streptococci, and fined the vendor. Under the Sale of Food and Drugs Act a large increase of sampling took place during 1910, particularly in "informal" samples. A notable amount of milk adulteration and of substitution of margarine for butter was thus detected. Dr. Porter draws attention to the need for amending legislation to secure that all vessels from which skimmed or separated milk is sold should be properly labelled. "Catch of the season" chocolates—articles apparently intended to provide practical jokes—were ascertained to contain cayenne pepper, and were very properly dealt with as dangerous under Section 3 of the Act of 1875. An anti-tuberculosis dispensary was opened at 15, Allsop-place, in November, and was at work before the end of the year. Considerable additions have lately been made to the staff of the public health department in view of increased work in many directions. In referring to public "sanitary conveniences," Dr. Porter states that progress has been made in providing free accommodation for women, and that a "urinette" installed in place of a water-closet at Oxford Circus has been largely used. The receipts of the borough council for the use of public conveniences in Marylebone amount, it would appear, to some £3000 per annum.

Metropolitan Borough of St. Pancras.—In dealing with infantile mortality and vitality Dr. J. F. J. Sykes again insists on the importance of attention to the nutrition of the mother before the birth and during lactation. "Our medical service," he observes, "must be styled not infant consultations, but medical consultations for mothers and infants—mothers first." Some six years ago all leaflets advising methods of artificial feeding were destroyed, and the experiment of persistently preaching and teaching breast-feeding alone was begun. In 1907 the St. Pancras School for Mothers at 37, Charlton-street, Somers Town, was started to provide medical consultations for those mothers and infants unable to secure medical advice, dinners for mothers suckling their infants, and educational demonstrations in "mother-craft" both at the school and in the home. In 1910 this school for mothers extended its work to children up to compulsory school age, with a view of preventing the defects so commonly found in course of medical inspection of schools, and in this direction now coöperates with the "Day Nursery" at 26, Cartwright-gardens, and the "Nursery School" at 18, Crowndale-road. These institutions are supported by voluntary contributions and voluntary workers, but they appear to be closely associated with the municipal organisation established in connexion with the Notification of Births Act. Dr. Sykes considers it regrettable that Metropolitan borough councils have no power under Section 12 of the Children Act, 1908, which, he claims, would be more valuable in their hands than in those of the County Council and boards of guardians, not so much for the purpose of prosecution, as for enabling sufficient pressure to be brought to bear upon parents whom the health authorities find neglecting to procure necessaries for their children. As in former years, the report deals with a variety of public health questions which are handled on somewhat original lines in St. Pancras, and on the front page, for the benefit of any hostile critics, Dr. Sykes quotes from Captain Cook the following useful sentence: "Preventive measures are always invidious, because when most successful the necessity for them is least apparent."

REPORTS OF SCHOOL MEDICAL OFFICERS.

City and County of Norwich.—The report of Dr. H. C. Pattin brings out several points of considerable interest both from the medical inspector's present point of view and that of the school medical service in general. Many school medical officers will cordially re-echo the remark that routine inspection is apt to pall and welcome the suggestion of a change occasionally to more interesting special work. A table is given showing that out of 394 cases of defect of all kinds needing treatment 189 obtained this from private doctors, four from the school dental officer, and the rest from public institutions in the town. Difficulty has been experienced with regard to treatment, owing to the refusal of one of the town's institutions to accept a subscription from, and allot letters of recommendation to, the education authority on the ground that the inspecting authority ought to provide and pay for treatment, although the same institution receives subscriptions from boards of guardians who have the statutory obligation of providing treatment which education authorities as yet have not got. Pending the settlement of the dispute it is hard that children should be refused treatment which they would otherwise have obtained freely, merely on the ground that they have been inspected in a public school. The absence of a dental institution in the town has led to the founding of a dental clinic opened in November, 1910, which has been successful from the beginning. The cost of this is not to exceed the proceeds of a ¼*d.* rate. Ringworm is treated at the municipal offices. A table of importance is that giving the "destination in life" of 630 boy "leavers." Why not girls also? In the better class schools 34 per cent. had no plans, in the mixed class 26 per cent., and in the poorer schools 45 per cent. The grouping of schools is according to the social circumstances of the children Special centres have been established for mentally subnormal children, and Dr. D. M. Mathieson suggests segregation at both ends of the scale.

City of Sheffield.—Dr. Ralph P. Williams displays and illuminates his statistical returns by some bold diagrams which are of the greatest assistance in making large masses of figures rapidly intelligible. The figures given for "bad" nutrition are from 13,346 children 7·9 per cent., from 6354 senior scholars 9·5 per cent., from 6992 infants 6·5 per cent., and it is stated that the medical officer is guided "by the presence or absence of anæmia and by the condition of the skin and hair, together with the height and weight of the child." It is doubtful, however, whether height can be used safely, and anæmia itself is difficult to estimate precisely. In 126 children hæmic murmurs of the heart were found, these being due to anæmia. A large proportion of these do indicate bad nutrition, and may, perhaps, occur apart from obvious anæmia. It may be mentioned in this connexion that large numbers of free meals are given in Sheffield, last year 198,413 breakfasts being given as well as the meals for children in the special schools. In an appendix of the greatest value attention is called to the career of mental defectives after leaving school, which shows the great necessity there is that legal powers should be obtained for the permanent care of such children. Out of 24 cases only seven were in regular

work and four of these were doing the most unskilled kind of labour. The total average wage of the whole 24 only amounted to 49s. per week, the majority being returned as making nothing at all. A large proportion of these cases are subject to attacks of temper more or less severe, and there are vicious, offensively dirty, and hopelessly unimprovable cases amongst them. One girl of 19 was at the time of report six months pregnant and appeared incapable of understanding that there was anything the matter. It is clear that nothing but the offer of facilities—compulsion beyond that supplied by economic stress is not needed—for residence in segregation colonies can be considered to deal adequately with the problem. Meanwhile, raising the school-leaving age so as to tide over the critical 16 year old period would be of great help.

City of Exeter.—This report deals with a total number of children on the register of 7045. Of these no less than 85 per cent. found to have defects were treated, 10 per cent. had left either school or the city, and only 5 per cent. were definitely untreated. The small number dealt with makes this possible. The report calls attention to the value of hygienic advice as for mouth-breathing due to slight enlargement of tonsils and adenoids.

Barry Urban District.—Mr. W. Lloyd Edwards divides children for purposes of nutrition statistics into three classes—above normal, below normal, and bad. No girls are returned as bad, and only 0·06 per cent. boys, while below normal there are only 8·91 boys and 4·48 girls. The figures are derived from 1437 girls (3–14 years) and 1447 boys (3–14). Considerable difficulty has been found with the treatment of defects discovered by medical inspection, and it is reported that with regard to "some classes of defects very little, if anything, is done." The great bulk of cases of dental caries are not treated, and ear discharges, tonsils, and adenoids are largely uncared for despite all the measures taken, even in some ear cases exclusion. These difficulties have led Mr. Lloyd Edwards to prepare and publish as an appendix a "scheme for the establishment of a school clinic" in a form to meet the requirements of the Board of Education. It is proposed to hold the clinic on Wednesday afternoons and on Saturday mornings at the council offices, and here minor treatments will be given. These two sessions will be further utilised for special examinations (truant, mentally defective, and special schools), for cases referred from the school inspection or by teachers and attendance officers, for examination of infectious diseases contacts or convalescents before readmission to school, and for interviews with parents. Ear, nose, and throat cases will be treated by a special arrangement on one afternoon a week at the hospital, vision defects will be treated once a week at a centre fitted up in one of the schools, ringworm will be treated at the hospital in a room to be arranged for the purpose. It may be mentioned that the Barry Hospital is a general hospital built and maintained out of the rates (see 131–133 Public Health Acts, 1875) and that all local medical men who desire to become members are on the staff. This arrangement no doubt simplifies matters and prevents some of the friction which has elsewhere arisen, but the scheme shows in detail just how a school clinic can make use of existing institutions and just where it is necessary to supplement them.

Cardiff County Borough.—Dr. E. Walford, in a note on nutrition, brings forward a very important matter that seriously requires attention. He points out that the medical inspectors report that 10·7 per cent. of male infants are below normal in nutrition and 7·2 per cent. of female infants. For "leavers" the figures are: boys 10·9 per cent. and girls 4·5 per cent. The medical officer points out that it is clear that the difference between the condition of boys and girls must be due to some extent to the different standard of comparison taken by medical inspectors. Comparing townships and counties one with another, this discrepancy is still more obvious, and the need for a definite standard is an urgent matter. Private arrangements for treatment have been made in Cardiff with two ophthalmic surgeons and seven dentists.

Borough of Margate.—The number of children suffering from impaired nutrition amounted to 6·19 per cent., and in view of the good health conditions in Margate this can only be put down to insufficient and improper feeding and bad home conditions, but the lack of a definite standard makes all comparisons very difficult.

Notts County.—Dr. Henry Handford reports that 5·6 per cent. of boys and 5·6 per cent. of girls were found to be below the average in nutrition. A beginning in dental treatment has been made, and some advance is recorded in the number of children who obtain spectacles after being advised to do so. The greatest objection to wearing glasses is in the rural districts. The medical officer reports strongly against the practice of the school medical officer being expected to advise closure of a school, when the attendance has fallen below a certain point owing to the prevalence of infectious illness, merely in order to avoid loss of grant.

County Borough of Huddersfield.—Ringworm in Huddersfield is treated by the local chemists, but the question of a school clinic has been fully discussed and plans are under consideration by the finance committee. The statistics are presented with the addition of a height-weight coefficient for certain age-periods by which it is proposed to measure the value of the social work in Huddersfield in years to come. The authorities have been considering school cleansing. School floors, furniture, windows, and out offices are to be washed and scrubbed seven times a year instead of four as formerly.

County Borough of Southport.—Dr. G. C. Barnes has issued a most painstaking and detailed report analysing the statistics from individual schools. Whooping-cough is a notifiable disease in Southport, and the medical officer remarks that it is just as infectious in Sunday schools as in the day schools, whereas the education authority has no legal control over the former. Every case notified is visited, and every endeavour is made to trace the origin of the disease.

Devon County.—The number of children returned as badly nourished in the administrative county is: boys 0·96 per cent. and girls 0·66 per cent. The teachers in Devonshire weigh and measure the children, do the vision testing, and assist at the examinations. One school nurse has been appointed.

Cambridgeshire County Council.—The medical officer discusses the possibility of starting a rural dental clinic. Official encouragement of the formation of local care committees has also been discussed during the year, but it was decided that lists of the defects notified to parents should be sent to the managers of the schools after each inspection, with a covering letter, seeking to enlist the active sympathies of the managers. Where replies have been received they have been favourable in their terms, but the number of such acknowledgements has been small. In small areas the groups of managers are in such close touch with schools as to be virtually care committees.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 7750 births and 5889 deaths were registered during the week ending Sept. 9th. The revised estimate of population of these towns in the middle of this year is 16,157,797 persons. The annual rate of mortality in these towns, calculated on this revised estimate, which had been 20·9, 21·2, and 20·6 in the three preceding weeks, declined again to 19·0 per 1000 in the week under notice. During the first ten weeks of the current quarter the annual death-rate in these towns averaged 16·6 per 1000, while in London during the same period the mean annual death-rate did not exceed 15·5 per 1000. The recorded annual death-rates in the 77 towns last week ranged from 9·4 in Hastings, 10·6 in Barrow-in-Furness, 11·2 in Wallasey, and 11·8 in Derby and in Halifax to 27·9 in Liverpool and in Burnley, 28·5 in Aston Manor, 28·6 in Stoke-on-Trent, and 33·1 in Sunderland. The 5889 deaths from all causes in the 77 towns last week were 479 fewer than the number recorded in the previous week, and included 2087 which were referred to the principal epidemic diseases, against 2900 and 2617 in the two preceding weeks. Of these 2087 deaths from the principal epidemic diseases no fewer than 1915 resulted from infantile diarrhœa, 58 from whooping-cough, 40 from diphtheria, 29 from measles, 28 from enteric fever, and 17 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 6·7

per 1000, against 9·4 and 8·4 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœal diseases in the 77 towns, which had been 2553, 2714, and 2461 in the three preceding weeks, declined again to 1915 last week, and caused the highest annual rates of 10·9 in Stoke-on-Trent, 11·8 in Aston Manor, 13·2 in Grimsby, 13·5 in Merthyr Tydfil, and 13·7 in Burnley. The deaths referred to whooping-cough, which had been 68 and 58 in the two preceding weeks, were again 58 last week, and included 17 in London and its suburban districts, 8 in Liverpool, 5 in Birmingham, 3 in Manchester, and 3 in Hull. The fatal cases of diphtheria numbered 40, and were 5 in excess of the average in the six preceding weeks; 14 deaths were registered in London and its suburban districts, 4 in Liverpool, 3 in Newcastle-on-Tyne, and 3 in Coventry. The deaths attributed to measles, which had been 59, 54, and 34 in the three previous weeks, further declined last week to 29, which was the lowest number recorded in any week of the current year; 11 deaths occurred in London, 4 in Wolverhampton, and 2 each in West Bromwich, Nottingham, Liverpool, and Oldham. The deaths referred to enteric fever, which had been 11, 18, and 21 in the three previous weeks, further rose last week to 28, and was the highest number recorded in any week of the current year; 3 deaths occurred in each of the following towns: London, Portsmouth, Birkenhead, Wigan, and Hull. The 17 fatal cases of scarlet fever were 9 in excess of the number recorded in the previous week, and included 5 in London, 2 in Leyton, and 2 in Leeds. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had declined from 1442 to 1327 in the four preceding weeks, rose to 1349 on Saturday last; 217 new cases of this disease were admitted to these hospitals during the week, against 149, 132, and 168 in the three previous weeks. These hospitals also contained at the end of last week 761 cases of diphtheria, 231 of whooping-cough, 122 of measles, and 89 of enteric fever, but not one of small-pox. The 1510 deaths from all causes in London last week showed a decrease of 19 upon the number returned in the previous week, and included 95 which were referred to diseases of the respiratory system, against 85 and 73 in the two previous weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 152 and 147 in the two preceding weeks, rose to 171 last week, and 322 inquest cases were registered. The causes of 24, or 0·4 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Sheffield, Leeds, Bristol, West Ham, Bradford, Hull, Nottingham, and in 54 other smaller towns. The 24 uncertified causes of death last week included 5 in Liverpool, 4 in Birmingham, and 2 in London.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 758 births and 536 deaths were registered during the week ending Sept. 9th. The annual rate of mortality in these towns, which had increased from 14·2 to 17·2 in the three preceding weeks, declined last week to 16·4 per 1000. During the first ten weeks of the current quarter the annual death-rate in these Scotch towns averaged 15·0 per 1000, and was 1·6 below the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 11·1 and 12·2 in Paisley and Edinburgh, to 19·4 in Greenock and 20·1 in Aberdeen. The 536 deaths in the eight towns last week were 28 fewer than the number in the previous week, and included 105 which were referred to the principal epidemic diseases, against numbers increasing from 62 to 134 in the five preceding weeks; of these 105 deaths, 78 resulted from diarrhœa, 12 from whooping-cough, 8 from diphtheria, 3 from measles, 2 from scarlet fever, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 3·2 per 1000, the mean death-rate last week from the same diseases in the 77 large English towns having been 6·7. The deaths attributed to diarrhœa, which had increased from 33 to 113 in the five preceding weeks, declined last week to 78, and included 67 of infants under two years of age; 47 deaths occurred in Glasgow, 13 in Dundee, 6 in Aberdeen, 3 in Greenock, and 3 in Perth. The deaths referred to whooping-cough, which had been 12 and 10 in the two preceding weeks, were 12 last week, and included 4 in Glasgow and 2 each in Edinburgh, Dundee, and Aberdeen. The fatal cases of diphtheria, which had been 5 in each of the two preceding weeks, rose to eight last week, of which 3 were registered in Glasgow, 2 in Dundee, and 2 in Leith. The deaths from measles, which had declined from 11 to 4 in the five preceding weeks, further declined last week to 3, and included 2 in Glasgow and 1 in Greenock. The 2 fatal cases of scarlet fever were recorded in Aberdeen, and those of enteric fever in Glasgow and Aberdeen respectively. The deaths referred to diseases of the respiratory system in the eight towns, which had been 29, 41, and 24 in the three previous weeks, rose to 53 last week, and were 11 in excess of the number in the corresponding week of last year. Of the 536 deaths from all causes in the eight towns last week, 167, or 31 per cent., were recorded in public institutions, and 21 deaths were attributed to different forms of violence. The causes of 20, or 3·7 per cent., of the deaths in the eight towns last week were not certified; in the 77 English towns the proportion of uncertified causes of death during the week did not exceed 0·4 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 598 births and 487 deaths were registered during the week ending Sept. 9th. The annual rate of mortality in these towns, which had been 19·4, 19·3, and 21·0 per 1000 in the three preceding weeks, further rose to 22·1 per 1000 in the week under notice. During the first ten weeks of the current quarter the annual death-rate in these towns averaged 18·0 per 1000; in the 77 English towns during the same period the mean annual death-rate was equal to 16·6, whilst in the eight Scotch towns it did not exceed 15·0. The annual death-rate last week was equal to 27·1 in Dublin (against 17·4 in London), 19·7 in Belfast, 25·2 in Cork, 16·6 in Londonderry, 17·7 in Limerick, and 26·6 in Waterford; whilst in the 16 smallest of these towns the mean annual death-rate did not exceed 16·0 per 1000. The 487 deaths from all causes in the 22 Irish towns were 25 in excess of the number returned in the previous week, and included 130 which were referred to the principal epidemic diseases, against 133 and 153 in the two preceding weeks; of these 130 deaths, 117 resulted from diarrhœal diseases, 6 from whooping-cough, 3 from diphtheria, 2 from enteric fever, 2 from scarlet fever, but not one from measles or from small-pox. These 130 deaths from the principal epidemic diseases were equal to an annual death-rate of 5·9 per 1000. The mean rate from the same diseases in the 77 English towns was equal to 6·7, while in the eight Scotch towns it did not exceed 3·2 per 1000. The deaths attributed to diarrhœal diseases, which had increased from 104 to 141 in the three preceding weeks, declined to 117 last week, and included 105 of infants under two years of age. Forty-nine deaths occurred in Dublin, 44 in Belfast, and 8 in Cork. The deaths from whooping-cough, which had been 8 and 7 in the two preceding weeks, were 6 last week, and included 4 in Dublin, 1 in Belfast, and 1 in Cork. The 3 fatal cases of diphtheria, of which 2 were registered in Dublin, were equal to the average in the three preceding weeks. The 2 deaths from enteric fever were recorded in Belfast, and those from scarlet fever in Dublin and Belfast respectively. The deaths referred to diseases of the respiratory system in the 22 town districts, which had been 30 and 31 in the two preceding weeks, rose to 44 last week. Of the 487 deaths from all causes in the 22 towns last week, 137, or 28 per cent., occurred in public institutions, and 8 deaths were attributed to different forms of violence. The causes of 8, or 1·6 per cent., of the deaths last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of death during the week under notice did not exceed 0·4 per cent. in the 77 large English towns, and was equal to 3·7 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881: Fleet-Surgeon John Lloyd Thomas has been placed on the retired list with permission to assume the rank of Deputy Surgeon-General (dated Sept. 3rd, 1911). The following appointments have been notified:—Fleet-Surgeons: J. D. Hughes, J. McElwee, G. T. Bishop, and S. T. Reid to the *President*, additional, for Civil Hospital Course; E. R. D. Fasken to the *Devonshire;* A. X. Lavertine to the *Terrible;* E. A. Shaw to the *Antrim;* and B. F. Parish to the *Aotæon*. Staff-Surgeons: J. H. L. Page to Devonport Dockyard; G. C. C. Ross to the *Vivid*, additional, for disposal; W. E. Mathew to the *Forth;* E. Folliott, A. J. Laurie, J. Verdon, L. M. Morris, R. H. Atkins, and A. W. Iredell, to the *President*, additional, for Civil Hospital Course; and E. D. J. O'Malley to the *Amethyst*. Surgeons: W. R. Harrison, R. F. MacMahon, G. H. S. Milln, A. D. C. Cummins, G. Moir, and J. McCutcheon, all to the *President*, for Civil Hospital Course; A. R. Davidson to the *Indefatigable;* R. H. St. B. E. Hughes to the *New Zealand*, additional, for Portsmouth Subdivision of Home Fleet; J. D. Keir to the *Venerable;* and G. W. M. Custance to the *Pembroke*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Captain Horace H. Kiddle is placed temporarily on the Half-pay List on account of ill-health (dated Sept. 2nd, 1911).

Colonel L. E. Anderson, principal medical officer of the Allahabad Brigade, has taken up duty at Bareilly as Principal Medical Officer of the Bareilly, Gharwal, and Dehra Dun Brigades. Lieutenant-Colonel J. C. Morgan, on promotion, has vacated the appointment of specialist sanitary officer in the Dublin District. Major J. Ritchie, from Multan, has been appointed to command the Station Hospital at Dalhousie. Major F. J. W. Porter, D.S.O., from the Military Hospital at Cosham, has taken up duty as Medical Officer in Charge at Lodmoor Camp. Major D. J. Collins has been selected for the appointment as Specialist Sanitary Officer at Dublin. Captain H. B. Connell has been ordered to Ireland for temporary duty, and on arrival will be posted to the Dublin District. Captain P. J. Hanafin has been appointed Specialist in Ophthalmology at Dublin in succession to Major D. J. Collins. Captain H. H. A. Emerson, at present doing duty at the Military Hospital, Clonmel, has been selected for the appointment of Adjutant of the Royal Army Medical School of Instruction, North Midland Division at Derby, with effect from Nov. 1st next. Captain J. H. Brunskill, Dublin, has been selected for appointment as Clinical Pathologist at the Curragh Camp. Sanction has been given by the War Office for an exchange of position on the Foreign Service Roster between Captain C. S. Smith and Captain R. N. Woodley serving at Mullingar and Bulford Camp, Salisbury Plain, respectively. Captain C. S. Smith will accordingly be required to embark for India for duty with the Northern Army about Jan. 27th next. Captain W. Bennett has been transferred from Naini Tal to the Station Hospital at Calcutta. Captain F. E. Rowan-Robinson from Colchester has taken up duty at the Military Hospital, Norwich. Captain P. Davidson, D.S.O., on completion of duty at the Royal Army Medical College, London, has been posted to the Aldershot Command for duty. Captain P. G. Hyde from Dublin has been placed in medical charge of Rathmore Camp. Captain J. W. S. Seccombe from Jhansi has been appointed to the Station Hospital at Nasirabad.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel H. C. L. Arnim has been granted leave of absence home from India for a period of two years. The services of Lieutenant-Colonel B. B. Grayfoot have been placed at the disposal of the Government of India by His Excellency the Commander-in-Chief. Major W. S. Willmore, on completion of special duty at the Central Research Institute at Kasauli, has been appointed Civil Surgeon to the Mirzapur district. Major T. S. Novis has been appointed Presidency Surgeon, Professor of Anatomy and Curator of the Museums at the Grant Medical College, Bombay. His Excellency the Governor of Bombay in Council has appointed Major R. W. Anthony on return from leave to be Civil Surgeon of Belgaum. Captain R. B. Nicholson has been appointed to the Medical Charge of the 36th Horse. Captain J. Husband has been appointed to the Medical Charge of the 30th Mountain Battery and Frontier Garrison Artillery. The services of Captain R. M. Barron have been replaced at the disposal of the Government of India by His Excellency the Commander-in-Chief. Captain G. A. Jolly, officiating civil surgeon, Mainpuri, has been selected to hold visiting medical charge of the Etah District. Captain M. S. Irani has been appointed Civil Surgeon of Bijapur District.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Attached to Units other than Medical Units.—Lieutenant John Leach to be Captain (dated May 18th, 1911).

Major William C. Beatley resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Sept. 9th, 1911).

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

In the September issue of this journal Captain W. R. O'Farrell, R.A.M.C., and Dr. A. Balfour, director of the Wellcome Tropical Research Laboratories at the Gordon College, Khartoum, discuss Granule Shedding in Treponema Pallidum and Associated Spirochætæ. Lieutenant H. Stott, I.M.S., makes a contribution to the study of the Ætiology of Beri-beri, and Lieutenant W. E. Marshall, R.A.M.C., describes Experimental Kala-azar in the Grey Monkey of the Sudan. Some Observations on Body Temperature, made by officers specialising in physical training during their course at the Royal Army Medical College, are chronicled by Captain P. Davidson, D.S.O., R.A.M.C., and Captain N. Dunbar Walker, R.A.M.C. An interesting contribution is one from the pen of Major W. S. Harrison, R.A.M.C., who records a case of Chronic Bacillary Dysentery due to a hitherto Undescribed Bacillus. Bacillary dysentery, as the author points out, has been attributed at various times to many other members of the colon group besides the Shiga, Kruse and Flexner bacilli, but Major Harrison has been unable to trace any record of a case caused by a bacillus similar to the one which he describes. The patient rapidly improved after the administration of a vaccine made from the bacillus. Within the last few years the value of iodine as a disinfectant for the skin has been much discussed, and among the advocates of its use in this connexion is Colonel N. Autelo of the Medical Corps of the Argentine Army. In "A New First-aid Packet" he discusses the purposes of and need for a first-aid dressing on the battle-field, and describes his own dressing "packet," which contains a phial of tincture of iodine. The article includes a table giving the principal specifications of the first-aid packet as used at present in the organised armies of the world.

ACCELERATED PROMOTION IN THE ROYAL ARMY MEDICAL CORPS.

It has been decided that the accelerated promotion granted to captains of the Royal Army Medical Corps who pass their qualifying examination for promotion to major in the second class (six months' acceleration) and in the third class (three months' acceleration) will not be applicable to officers promoted to the rank of captain after Dec. 31st, 1908. This means, for all practical purposes, that accelerated promotion in the Royal Army Medical Corps becomes nearly impossible, as under 1 per cent. of officers ever qualify in the first class (12 months' acceleration), and now that acceleration in the classes in which men hope to qualify has been abolished, several hundred officers who came into the Army Medical Service hoping to obtain accelerated promotion if successful in their promotion examination have their hopes dashed to the ground. The Royal Warrant was carefully remodelled by Sir Alfred Keogh, K.C.B., during his tenure of office as Director-General of the Army Medical Service, and its present alteration appears to require some explanation from the members of the Advisory Board or the present Director-General.

ON Monday next, Sept. 18th, at 3 o'clock P.M., a series of living pictures illustrating life on the Oxo Cattle Ranches will be exhibited at the Model Oxo Factory, 43 to 51, Park-street, Southwark Bridge.

Correspondence.

"Audi alteram partem."

"COMFORTER" OTITIS MEDIA.

To the Editor of THE LANCET.

SIR,—The suggested relationship between ear disease and the use of the "dummy teat," outlined by Mr. W. H. Bowen in an article under the above heading in THE LANCET of Sept. 9th, p. 758, adds yet another charge to the long list of criminal indictments recorded against this instrument of torture. That the comforter should be tolerated in this age of hygiene is undoubtedly largely due to the example, the apathy, and the conduct of the medical profession. One distinguished children's specialist in London has, to my knowledge, advocated its use in his lectures to health workers. Further, I regret to say that I still occasionally see the Wimpole-street baby with a dummy in its mouth creating prospective work for the Harley-street throat specialist, and I have frequently heard my learned brethren argue that unrestrained crying is fraught with more serious consequences than sucking indiarubber teats. If gold rusts in this way what are we to expect of iron?

Although, I imagine, there are few who have taken a more active part in the crusade against comforters than I have myself, none the less I do not believe their chief offence is the introduction of septic matter into the mouth. I regard as more injurious the habit of sucking which it induces, for this soon becomes an undoubted "tic" and has subsequent consequences which are not easy to measure. Further, the constant pressure of the teat against the roof of the mouth and the associated muscular actions must, on purely mechanical grounds, tend to accentuate and aggravate the highness and narrowness of the palate, which is one of the characteristic tendencies of recent human evolution.

With Mr. Bowen I certainly believe that the use of the comforter contributes to the highly complex pathogenesis of adenoids and otitis media, but not only in the manner that he suggests. Every infant in the East-End of London has its comforter just as surely—indeed, more surely—than it has a tight binder round its abdomen, so that, in spite of Mr. Bowen's belief that a deduction with respect to the correlation between comforters and otitis media can be drawn from East-End experiences, I beg altogether to differ from him. All East-End infants have comforters, and nearly all have adenoids, but this is no proof that there is any closer correlation. For the last six and a half years I have kept a systematic record of the "tonsil and adenoids" history of every infant brought to my "infant consultations" in Marylebone. These records include the cases of nearly 1000 infants who have been kept under observation, in some cases for nearly two years, and in most instances for many months. My experiences derived from this source of information are that adenoids and enlarged tonsils, or at least their commencements, are exceedingly common during the first year of life, and that they are often sufficiently obstructive to require surgical removal. Both Mr. T. Jefferson Faulder and Mr. Rupert Farrant at the St. Marylebone General Dispensary, and Mr. W. G. Howarth at the Queen's Hospital for Children, have operated at my request on quite a number of infants under one year of age, and occasionally under six months. Only cases have been chosen for operation which have proved intractable to the routine methods of medical treatment, but the results in all cases have greatly encouraged me to have recourse to early operative interference. On the whole, I have found adenoids, enlarged tonsils and otitis media quite as common among Marylebone infants who, relatively speaking, seldom have comforters, as among Hackney infants who possess them without exception.

The typical adenoids, tonsils, and otitis history, of which I have over a hundred, is as follows. At about the third month of life the infant has a slight pharyngeal cough and running of the nose (an ordinary cold due to defective hygienic conditions and respiratory noxæ). The infection then probably extends to the Eustachian tube, and a small chain of enlarged lymphatic glands begins to develop from the mastoid process downwards. These glands continue to increase in size *pari passu* with the growth of the lymphatic hyperplasia of the naso-pharynx. After a time, usually from three to six months, evidence of distension of the middle ear begins to show itself by pain, crying, restlessness, rolling of the head (meningismus), and bulging of the membrane. With rupture of the membrane and otorrhœa the symptoms rapidly subside. Incision of the membrane greatly expedites matters, but the operation is troublesome to perform without an anæsthetic.

That naso-pharyngeal sepsis has its origin in a large number of cases at, or even before, the third month is quite indisputable, and this before mouth-breathing has become habitual or even occasional. Accursed instrument as the comforter undoubtedly is, this much must at least be said for it: it tends to promote nasal breathing by keeping the mouth closed in a perennial act of sucking.

I am, Sir, yours faithfully,

London, W., Sept. 8th, 1911. ERIC PRITCHARD.

THE RADIO-ACTIVITY OF SEA-WATER.

To the Editor of THE LANCET.

SIR,—I venture to supply data pertinent to the query contained in the letter of Dr. F. Hernaman-Johnson appearing in THE LANCET of the 9th inst.

That sea-water contains radio-active substances is undoubted owing to the measurements of Eve, Joly, and Knoche. These observers have made quantitative determinations of the amount of radium contained in a litre of sea-water. The quantity is exceedingly small, as is evidenced by the following numbers. Eve obtained water from the North Atlantic, and found a mean value of $0 \cdot 9 \times 10^{-12}$ grm. of radium per litre—i.e., about one billionth of a gramme per litre. Joly has made determinations of the radium content of ocean water from various parts of the world, from which it is evident that widely different values are to be anticipated. The mean of a large number of observations by Joly is 16×10^{-12} grm. of radium per litre. It may be noted that observations of the radium content of river-water, those of the St. Lawrence by Eve and of the Nile by Joly, gave values about one-quarter of the values obtained by them for sea-water. Knoche from 12 observations of Atlantic water obtained a mean value of 17×10^{-12} grm. of radium per litre. Knoche points out that this quantity is about one-twentieth of that in a *weak* radio-active spring.

It is not within my province to offer an opinion as to the therapeutic value of radium, but one or two statements contained in the letter in question call for comment. Dr. Hernaman-Johnson bases his arguments for the therapeutic value of salt water being due to its radio-activity upon the assertion that salt water is not efficacious after it has been kept for three weeks. If sea-water owed its radio-activity only to the radium emanation dissolved in it, it is true that, on keeping, its activity would decrease to a few per cent. of its original activity in this time. But this is not the case. The measurements which I have cited were made upon samples of sea-water which in some cases were several months old, and proved the presence not only of the emanation but of the parent substance—radium itself. This being so it is clear that the amount of emanation in a sample of sea-water remains constant, for its spontaneous disappearance is balanced by its production from the parent substance.

As to the origin of this radio-activity, upon which Dr. Hernaman-Johnson touches, one cannot do better than quote the opinion of Professor Joly[1]: "Oceanic radio-activity is, most probably, in part referable to the denudation of rocks and the transport of the dissolved and suspended radio-active materials to the ocean. The considerable amounts of radium contained in deep-sea sediments, even from the most central parts of the ocean, suggests that much of the uranium reaches the sea in solution or in very fine suspension, and, in part, ultimately finds a resting-place among the oozes everywhere slowly collecting."

I am, Sir, yours faithfully,

SIDNEY RUSS, D.Sc. Lond.,
Beit Medical Research Fellow.
Cancer Research Laboratories, Middlesex Hospital, Sept. 11th, 1911.

[1] Philosophical Magazine, March, 1908.

A QUESTION IN EUGENICS.

To the Editor of THE LANCET.

SIR,—Your correspondent of Sept. 9th complains that the main issue of this discussion has been obscured by emotionalism. In whetting his wits on the sermon he loses sight of the text. The original query[1] had reference to "the legal and moral aspects of the case," and consequently every reply which ignores these aspects is irrelevant. If all expression of opinion upon ethical questions, though couched in sober phrase, be accounted "emotional," no doubt I for one must plead guilty, though even to please your correspondent I regret that it is beyond my powers to answer one question by replying to another. Possibly, in his opinion, all ethical considerations whatsoever are tantamount to rubbish, but if not I will endeavour to satisfy him not only by setting my view of the issue "in the dry light of intelligence," but by the use of the baldest Saxon.

The moral aspects of this case involve a few "emotional" factors, such as humanity, justice, and parental and professional ethics, which, since they determine, first, opinion, and, secondly, conduct, are not practically negligible. Let us bracket the first two together and deal with them seriatim.

1. Since the degenerate individual is an actuality and posterity a potentiality, is it humane and just upon the part of society to inflict injury upon anything *in esse* for the sake of otherwise obtainable benefits to something *in posse*? To be sure, your correspondent appears to argue that by injuring the individual we are in reality doing him a kindness in freeing him from a burden of anxiety and expense which he may possibly never contract, or may be prevented from contracting, without the necessity of submitting to an objectionable form of mutilation. I venture to submit that the patient himself would not agree with this sophism, and would find his dissent endorsed both by the laws of the land and by the consensus of public opinion.

2. If it be morally desirable that a father should procure the sterilisation of his epileptic child, surely there is something wrong with our present conceptions of the parental relation. If the true object of parental affection be the race rather than the individual, it would seem "in the dry light of intelligence" that a father's proper course with regard to the weaklings of his brood would be to treat them like kittens and put them in the bucket.

3. As to the professional aspects of the case I have already stated my opinion that a surgeon's duty is to his patient, and that the only legitimate use of the knife is to remove disease or to alleviate personal suffering; and the "light of intelligence," however "dry," only serves to bring this duty into greater prominence. Dispassionate ratiocination no more implies callousness than a cool head implies a cold heart

If I do not misinterpret his somewhat loose phraseology, your correspondent seems willing to allow to the unfit the option either of retiring to a colony for degenerates or of being sterilised and free. So far so good; but the alternative—if, indeed, it be seriously proposed—is in no way practicable. Can a child or a lunatic comprehend the terms of the option? There is also this further objection—namely, that unless the unfitness of the degenerate who has preferred sterilisation be of a minor order, in which case it would become a nice question whether there were any real need to sterilise him at all, he might possibly find himself both sterilised and secluded. It must be remembered that sterilisation, far from being a panacea for degeneracy, is a positive aggravation of it, and that the sterilised degenerate is thereby rendered even less fit than before to assume the control over his own actions. All sexual disabilities, whether congenital or acquired, have an injurious effect upon the mental organisation; and though one such condition may be less injurious than another, it is none the less true that they are all of them harmful. This statement holds both of vasectomy and of cryptorchidism. It is needless to inform anybody, save those who read only to misread, that no party to the present correspondence has sought to establish any further analogy between these two conditions.

This being a free country, I suppose that it is within the option of those void of understanding to mutilate themselves, by vasectomy or otherwise, in order to avoid this or that responsibility which nature has entailed upon them, but such practices are indicative of mental unsoundness, and are beacons to warn, not signals to direct. As there are more ways of killing a dog besides hanging him, so there are more ways of dealing with a degenerate besides mutilating him. The "dry light of intelligence" need not blind us to the existence of alternatives. That were more characteristic of the light of a dry intelligence. Let us beware lest we mistake the one for the other.

I learn with satisfaction that the sterilisation of degenerates is not yet legalised in Switzerland, and that Indiana still possesses the monopoly of this egregious enactment.

I am, Sir, yours faithfully,

BRYAN CHARLES WALLER, M.D. Edin., F.R.C.S.

Kirkby Lonsdale, Sept. 11th, 1911.

[1] THE LANCET, July 29th, 1911, p. 328.

THE CURIOUS HISTORY OF A SWALLOWED PIN.

To the Editor of THE LANCET.

SIR,—The interesting communications from Dr. W. Balgarnie and Dr. I. D. Chepmell, which have lately appeared in THE LANCET under the above head, remind me of two experiences of my own where the errant body was a needle.

Sixty years ago the late Dr. Lionel Beale was house physician at the King's College Hospital, and I had the privilege of acting as clinical clerk for the late Dr. Bentley Todd, under whose care a woman was admitted suffering from obscure gastric symptoms. Her case required and received constant and careful examination. One morning Dr. Beale discovered a small painful spot in the epigastrium, and a feeling suggestive of the presence of a foreign body. This was cut down upon and a small needle withdrawn without any difficulty. A day or two after another such appeared which I removed in a similar manner. During the ensuing four or five weeks we extracted between us 43 needles and three pins from the epigastric region.

At first the patient denied all knowledge, but when the collection increased she stated she remembered that years ago she had swallowed a packet of needles. On finding the pins, which had all lost their heads, we carefully examined the needles and found all imperfect, a few having lost their points, but most of them had broken eyes. On drawing the patient's attention to this fact and explaining to her that it was not usual to sell damaged needles, to say nothing of pins in a packet, she made the following statement. She had for years earned her living by fine needlework, and had been in the habit, on breaking a needle, of thrusting it into her stomach instead of throwing it away. I think from her generally neurotic condition this explanation was probably the true one. I believe the case terminated fatally soon after I lost sight of her. The collection was, I fancy, sent by Dr. Beale, with a note of the case, to the Museum of the Royal College of Surgeons of England.

Another case occurred some years after in my private practice as follows. Sent for one morning to see a child suddenly attacked the day before with acute pain in the knee, I found a fine healthy girl (3 to 4 years old), stated never to have had an ailment till yesterday, when she felt acute pain in the right knee but which soon passed off. I found the joint apparently normal, painless, with motion unimpaired and sound; during manipulation on pressing my finger over the internal condyle the child screamed with pain, and on more careful examination I fancied I detected a foreign body. I cut down and exposed a sharp point, seized it with forceps, and with some difficulty withdrew a large perfect carpet needle, which appeared to have transfixed the two condyles of the femur. The needle was about 2 inches in length, very strong and very firmly held by the tissues, and withdrawn with some difficulty. As a precaution I applied a splint and kept the child in bed for a day or two, but she never suffered the least inconvenience and was perfectly well at once. The pain was evidently due to the needle having shifted its position. The mother and nurse were both greatly exercised and could throw no light on the matter. There had been no upholstering in the house, for which kind of work such needles are chiefly used. There was no scar on the outside of the joint indicating the point of entry of the

needle, and until the day before my visit no suspicion of anything wrong. This is one of many experiences that in the course of a long practice have passed my understanding.

I am, Sir, yours faithfully,

EDW. LIDDON, M.D. Edin., J.P. (Som.).

Taunton, Sept. 7th, 1911.

THE TREATMENT OF TORTICOLLIS.

To the Editor of THE LANCET.

SIR,—I was interested to read in your issue of this week the article by Mr. Paul B. Roth on this subject and pleased at his protest against the various forms of retention apparatus so commonly recommended and still frequently employed. I would go even further and say that the exercises and manipulations which he employs are equally unnecessary. During the last few years I have operated on rather a large number of these cases and have gradually discarded almost all forms of subsequent treatment, whether by apparatus, exercises, or manipulations, and have been very pleased with the results. After division of the affected muscle I have the child kept lying flat on the back with no pillow for between two and three weeks, allowing free movement of the head, for I think the one thing that makes for a recurrence is allowing the child to sit up.

Under any circumstances relapses after operation for torticollis seem to be very rare, and I cannot call to mind a single case that has been bad enough to necessitate a second operation; in fact, the very good prognosis after operation is one of the several rather curious features of the affection. I entered somewhat fully into the subject in a paper in the Archives of the Middlesex Hospital, July, 1910, and Mr. Roth would see there how fully I am in accord with his own views as to the use of apparatus subsequent to the operation.

I am, Sir, yours faithfully,

Queen Anne-street, W., Sept. 9th, 1911. THOS. H. KELLOCK.

SALVARSAN ("606") AND MERCURY IN THE TREATMENT OF SYPHILIS.

To the Editor of THE LANCET.

SIR,—May I trespass on your space to correct an inaccurate statement attributed to me in THE LANCET of August 12th, p. 474, by Mr. W. d'Este Emery, who says, "In THE LANCET of July 29th Major H. C. French states that it is impossible to carry out the Wassermann reaction *quantitatively* by any of the ordinarily suggested *modifications*." If Mr. d'Este Emery had read my article more carefully he would have observed that I quoted the *opinion* of Mr. Boas, an acknowledged authority on Wassermann's work.

I wrote that "Mr. Boas recently lays great stress upon the importance of carrying out all Wassermann's reactions in a *quantitative* manner—a method which is impossible in the case of all the ordinary suggested *modifications*. Mr. Boas obtained much better results and stated that the Wassermann reaction has not, and *will not, obviate the necessity for clinical observation* in syphilis."

Mr. H. W. Bayly, in THE LANCET of August 12th, p. 473, endorses my statement. He writes: "I am entirely in accord with Major French's quotation of Mr. Boas's opinion as to the superiority of Wassermann's original technique and the importance of *quantitative* estimations."

I am, Sir, yours faithfully,

Sept. 5th, 1911. H. C. FRENCH, Major, R.A.M.C.

THE PATHOLOGY OF PAPILLŒDEMA.

To the Editor of THE LANCET.

SIR,—In the notice in THE LANCET of Sept. 2nd, p. 700, on Mr. Leslie J. Paton and Dr. Gordon M. Holmes's paper on the Pathology of Papillœdema credit is given to these authors for originality in the hypotheses advanced for explaining the origin of this condition. I am, therefore, compelled to state that in this matter they have, no doubt unintentionally, omitted to acknowledge my work on this subject published in my book, "Glaucoma, an Inquiry into the Physiology and Pathology of the Intra-ocular Pressure," to which they do not refer except in the last three lines of their paper.

I am, Sir, yours faithfully,

Nottingham, Sept. 4th, 1911. THOMSON HENDERSON.

SANITATION AND THE KORAN.

To the Editor of THE LANCET.

SIR,—I note that, in the issue of THE LANCET of August 19th, p. 526, in your report of the discussion of Professor Simpson's paper on The Sanitation of Villages and Small Towns in the Tropics, with Special Reference to Efficacy and Cheapness," I am reported to have said, touching the utilising of the religion of the natives in advancing the standard of public health among them, that "the Khoran, unfortunately, gave no help whatever in this direction." This is the very reverse of what I said. What I did say was that there were very few principles of elementary sanitation for which support could not be found either in the Koran itself or in the teaching of the Muhammadan doctors.

I am, Sir, yours faithfully,

M. CAMERON BLAIR.

Royal Societies Club, St. James's-street, S.W., Sept. 6th, 1911.

THE CHOLERA EPIDEMIC.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

SINCE the date of my last letter on this subject[1] there has been a considerable extension of the cholera epidemic. It is now prevalent in many parts of Asia Minor and Mesopotamia, in Constantinople itself, in the Macedonian vilayets, and it has quite recently appeared in Mecca. It has slightly increased in Russia; it is still epidemic in Italy; and the infection exists, though scarcely in epidemic form, in certain places in France, in Austria and Hungary, in Montenegro, and in Persia.

Cholera in Russia.

The following are the latest returns of the epidemic in Russia:—

Week ending July	16th (29th)	.....	35	cases,	12	deaths.
,, ,,	23rd (Aug. 5th)	...	52	,,	22	,,
,, ,,	30th (,, 12th)	...	71	,,	37	,,
,, ,, Aug.	6th (19th)	.....	134	,,	57	,,
,, ,,	13th (26th)	.....	174	,,	79	,,

It will be seen that the figures are still rising. In the first week of the table the disease was confined to the governments of Samara, Saratof, Stavropol, and Astrakhan, and the town of Odessa. To these were successively added the governments of Simbirsk, Tambof, Voronezh, Ekaterinoslav, Kostroma, Moscow, and Yaroslavl, the territories of Kuban and Daghestan, and the towns of Baku, Novorossiisk, and Rostof-on-Don.

Cholera in Constantinople.

The latest weekly returns have been as follows:—

August 1st to	7th	.....	181	cases,	100	deaths.
,, 8th ,,	14th	.....	263	,,	139	,,
,, 15th ,,	21st	.....	394	,,	213	,,
,, 22nd ,,	28th	.....	200	,,	137	,,
,, 29th ,,	Sept. 4th		324	,,	155	,,

The infection is widely spread through many parts of this city and its suburbs. Much alarm has been created by the occurrence of a large number of cases at Buyukderé, a village near the northern end of the Bosphorus, where the Russian Embassy and some legations pass the summer, and which is a favourite resort in the hot months for many of the inhabitants of the capital. Another "foyer" of the disease formed at Haskeui, a low-lying quarter near the tip of the Golden Horn largely inhabited by Jews. The above figures apply only to the civilian population of Constantinople; they would have to be considerably increased were the cases occurring among the troops also included. I refer below to this important question of the spread of cholera by troops returning from Albania.

[1] THE LANCET, August 19th, p. 538.

Cholera in Asia Minor and Mesopotamia.

The disease is on the increase in Smyrna, as shown by the following figures:—

Week ending July 30th	.....	27 cases,	18 deaths.
,, ,, August 6th	.....	18 ,,	11 ,,
,, ,, ,, 13th	.....	52 ,,	37 ,,
,, ,, ,, 20th	.....	122 ,,	80 ,,
,, ,, ,, 27th	.....	117 ,,	63 ,,
,, ,, Sept. 3rd	.....	188 ,,	86 ,,

This increase of the disease in Smyrna is attributed to the contamination of certain sources of water-supply. These sources have been ordered to be closed and others substituted for them, and it will be of interest to observe if this measure is followed by a marked subsidence of the epidemic. At Zunguldak, on the Black Sea, the disease still lingers among the coal-miners. Elsewhere in Asia Minor cholera is more or less prevalent at several places in the vilayets of Angora, of Sivas, of Konia, and of Broussa. The following are the latest returns from the Bagdad vilayet:—

From July 28th to August 4th	.....	27 cases,	15 deaths.
,, August 5th ,, ,, 11th	.....	7 ,,	10 ,,
,, ,, 12th ,, ,, 18th	.....	7 ,,	4 ,,
,, ,, 19th ,, ,, 26th	.....	10 ,,	7 ,,
,, ,, 27th ,, Sept. 2nd	.....	47 ,,	25 ,,

The majority of these cases have occurred at Amara, on the Tigris. Only a few have been seen in Bagdad itself, and still fewer at Kerbela. The disease still prevails at Basra, though it is decreasing, as shown by the following figures:—

From July 30th to August 3rd	...	31 cases,	24 deaths.
,, August 4th ,, ,, 9th	...	25 ,,	18 ,,
,, ,, 10th ,, ,, 15th	...	30 ,,	20 ,,
,, ,, 16th ,, ,, 25th	...	14 ,,	9 ,,
,, ,, 26th ,, Sept. 2nd	...	9 ,,	8 ,,

From Consular reports it may be gathered that the infection was apparently brought to Basra from Amara and Ezra's Tomb (Ozeir), on the Tigris, by labourers who come into Basra at this season with lighters of grain.

Cholera in Persia.

The outbreak of cholera at Mohammerah, mentioned in my last letter, has since extended considerably. At Mohammerah itself the following figures have been reported:—

Week ending July 29th	.....	2 cases,	2 deaths.
,, ,, August 5th	.....	9 ,,	8 ,,
,, ,, ,, 12th	.....	91 ,,	76 ,,
,, ,, ,, 19th	.....	53 ,,	51 ,,
,, ,, ,, 26th	.....	40 ,,	33 ,,

From Mohammerah the disease spread to Ahwaz, some distance up the Karun river. In the week ending August 12th 12 cases and 7 deaths were seen here; in the two following weeks there were respectively 47 cases with 51 deaths, and 49 cases with 45 deaths. The disease was also reported to have appeared at Abadan.

Cholera in Syria and Palestine.

A single case of the disease was recently reported from Damascus. Several imported cases have occurred on pilgrim ships in quarantine at the lazaret of Beirut, but none in the town. Single cases (apparently imported) have also been seen at Jaffa and Caiffa.

Cholera at Mecca.

Of still graver import than any of the outbreaks as yet recognised is the appearance, now reported, of the disease among the pilgrims at Mecca. It may be noted that the month of fasting—Ramazan—began on August 25th of this year. During the month good Moslems allow nothing to pass their lips between sunrise and sunset, and many of them make up for this fast by much feasting at night. The conditions thus brought about have always proved favourable to the prevalence of cholera; and this must especially be the case among pilgrims, doubly so among pilgrims in the holy town of Mecca itself, and trebly so in the droughty heats of late summer and early autumn. A severe epidemic of the disease in this year's Haj must therefore, unfortunately, be anticipated. An added danger lies in the fact that this year, it appears, the first day of Kurban Bairam will fall on a Friday; the pilgrimage will therefore be a Haj-i-Akbar, and may be expected to be attended by exceptionally large numbers of pilgrims. There are already signs that this will be the case.

The first intimation of the appearance of cholera at Mecca was contained in a telegram dated Sept. 1st, which stated that three Javanese pilgrims from Singapore, inhabiting the same house, had simultaneously fallen ill in the night with all the symptoms of cholera. The next day's telegram reported that 11 more suspected cases, with 2 deaths, had occurred since the previous night, and that 15 others had been recognised after death. These figures alone speak of a rapid extension of the disease among a particularly susceptible population.

Cholera in the Yemen.

Cholera appears to have been more or less prevalent in Hodeidah and other places in the Yemen (such as Loheia, Zeidieh, &c.) through the greater part of August. But at Hodeidah the outbreak is said to have come to an end on the 25th of the month.

Cholera in the Macedonian Vilayets and among Returning Troops.

As mentioned in my last letter, cholera has been prevalent among the troops recently engaged in the military operations in Albania. Cases and deaths in considerable, but not in very large, numbers have been reported from Ipek, from Scutari, from Monastyr, from St. Giovanni di Medua, and from Valona. In none of these places can the outbreak be described as severe; but, unfortunately, the troops returning thence to other parts of the country have been instrumental in spreading the infection far and wide. Many infected groups of soldiers arrived at Salonica with the disease amongst them. Some, but not all, were put into isolation camps in or near Salonica; but most of the infected groups appear to have been at once put on board transports and sent to their destination. The result has been that a series of deeply infected transports have recently arrived at Smyrna, the Dardanelles, and elsewhere. On some as many as 50, 100, 150, or even more, cases of cholera occurred during the journey of 24 to 30 hours, and large numbers of deaths were reported on their arrival. The Turkish lazarets have been filled to overflowing with these troops, and recently it has been found necessary, instead of sending them to the lazarets (which were never intended for troops), to land them on the shores of the Bosphorus, or elsewhere, and place them under tents in improvised quarantine stations. This movement of infected regiments from Salonica and elsewhere is, unfortunately, and in spite of energetic representations, still continuing. In spite of equally energetic representations it was fully intended to hold the autumn manœuvres this year in the Macedonian vilayets; but, fortunately, commonsense has at last prevailed, and it was officially announced on Sept. 5th that, owing to the cholera epidemic, these manœuvres had been countermanded.

Cholera in Montenegro.

On August 29th a telegram from Podgoritza reported that a few cases of cholera had been seen in the village of Zebdjé, in Montenegro. It was added that the disease had been present there during the preceding 15 days.

Cholera in Austria-Hungary.

On July 31st the Austrian Ministry of the Interior issued a statement to the effect that between July 23rd and 30th 12 new cases of cholera had been registered in the province of Kuestenland, of which 11 had occurred at Trieste and 1 at Capodistria. In the following week (July 31st to August 6th) there were 14 more cases at Trieste, which was declared infected. Between August 7th and 13th 5 cases with 2 deaths occurred at Trieste, 6 cases with 4 deaths in the commune of Capodistria, and 2 cases with 1 death at Muggia; all these places are in the province of Kuestenland. The totals for the Austrian Empire since May 24th were then put at 50 cases of cholera with 19 deaths. Since then the existence of the disease has been reported from Fiume and from Budapest.

Cholera in Italy.

The following are the latest official returns of the cholera epidemic in Italy. Between July 22nd and 27th the disease was present in many places in the Naples province, including Naples itself; and in a smaller number of places in the provinces of Avellino, Benevento, Caltanisetta Campobasso, Caserta, Catane, Girgenti, Livorno, Palermo, Rome (1 case

only, at Civita Vecchia), and Salerno. The totals were not quoted. The later bulletins give the totals for all Italy as follows:—

From	July 27th	to	August 1st	...	803	cases,	320 deaths.
,,	August 1st	,,	,, 6th	...	1039	,,	389 ,,
,,	,, 6th	,,	,, 13th	...	1737	,,	624 ,,
,,	,, 13th	,,	,, 20th	...	1701	,,	659 ,,
,,	,, 20th	,,	,, 27th	...	1684	,,	599 ,,

In addition to the provinces above named, the disease had appeared in those of Genoa, Messina, Potenza, Venice, Syracuse, and Trapani. On August 22nd there were as many as 22 cases in Rome itself; and this is ascribed to a certain infected milk-supply.

Cholera in France.

Marseilles has so far been the only town in France in which cholera has been known to occur during the present epidemic. In addition to the cases already reported there were 3, occurring in a lunatic asylum, and 1 suspected case in the town on August 10th. (The local papers were quoted as reporting 27 cases with 12 deaths in this asylum.) On the 11th 6 new cases were seen (of which 4 occurred in the asylum); on the 12th there were 2 cases and 1 death; on the 17th 3 more cases were reported; and again 3 more on the 19th. Finally, from the 20th to the 23rd 7 cases with 4 deaths were stated to have been observed. Since then no further information has been received here. It may be added that the appearance of cholera in Tunisia is rumoured, but no official confirmation of the rumour has yet been received.

Constantinople, Sept. 6th.

FRENCH MEDICAL OPINION ON THE BRITISH INSURANCE BILL.

(FROM OUR SPECIAL COMMISSIONER.)

(*Concluded from p. 405.*)

Paris.

To the French medical practitioner, as already explained, the free choice of the medical attendant is the ruling principle governing all the actions of the organised members of the profession. It naturally follows that the Mutualist or Friendly Benefit Societies have become the chief obstacle to the realisation of this principle. Consequently anything which in the British National Insurance Bill would either increase or leave in the hands of Friendly Societies or clubs powers over the medical profession stands condemned in the opinion of French medical men. Any recognition, therefore, by the Bill of what are termed "approved societies" is looked upon with suspicion. Of course, there is no objection to Friendly Societies as such. Indeed, if imitation is the sincerest form of flattery the British Friendly Societies have no ground for complaint, for the medical profession itself in France has followed their example. The society known as the Concours Médical and the Medical Syndicates, or Unions, of France have created a number of mutual benefit or insurance associations, which provide to their subscribing members (all medical men) assistance in case of legal prosecutions, of illness, or old age, and on their death bring help to their widows and children. This is, the French medical practitioners maintain, the proper function of Friendly Societies, and they recognise by imitation the usefulness of such organisations. The difference arises, however, when the lay committees governing the Friendly Societies take upon themselves to organise, not merely the funds that are to provide financial assistance to the sick, but the medical services, employing medical men as hired servants, and imposing them on the patients.

French Mutualist and British Friendly Societies.

In England, however, the question may be asked whether the French Mutualist movement in its relations with the medical profession is sufficiently analogous with the growth of Friendly Societies and medical aid clubs in England to provide useful points of comparison. Both spring from the same humanitarian movement, which is sometimes called the school, a more or less romantic school, of 1848. The help that the Friendly Societies aim to give used to be supplied by the ancient guilds or trade corporations. These gradually fell into desuetude in England and were abolished in France by the decree of the Constituent Assembly dated June 14th, 1791. Societies for mutual help were then only allowed on the condition that they did not contain more than ten persons belonging to the same trade. This so crippled any organisations of the kind that from 1794 to 1806 there were only 13 such associations in Paris. The law of the Empire of 1810 did not allow any sort of association if it consisted of more than 20 members, but the Republic of 1848 granted entire freedom of association, and the embryo societies that had existed previously now budded forth. Under the Second Empire the objects of French Friendly Societies were strictly limited to sick insurance, and their organisation was placed absolutely under the dependence of the Government. Even for the General Association of the Medical Men of France the Government appointed the president. Napoleon III. could not trust medical men to elect their own leader. But under the Third Republic the freedom of association was restored, and the law of 1884 gave legal standing to trade unions and similar associations. Many trades unions in France, as in England, have a medical aid organisation. A law, dated April 1st, 1898, regulates anew the position of Mutualist Societies. The subscriptions collected by such societies, the law says, should serve to pay for help in case of sickness, for old age pensions, for accidents, funerals, and for relief of widows and orphans. Such are the objects, and so far so good. If this were the whole of the law the medical profession would warmly approve of the enactment. Then there are clauses which say that by means of special receipts or special levies the societies may pay for the organisation of technical classes, of agencies to find work for the unemployed and funds to relieve the unemployed. This, too, is very well, so far as it goes; but Article II. of the law stipulates that all members shall have the right to the same advantages. Theoretically, this also seems quite fair, but in practice it is very unjust and injurious to the medical profession, for it seems that a member, however rich he may become, shall have an equal right to medical aid which was organised to secure medical assistance to persons of very limited means. Thus, in France, there is a legal sanction to the abuse or grievance which is a matter of such constant complaint in England. Exactly the same sort of abuse occurs in France, and causes the medical men to urge that Friendly Societies should organise only the provision of financial relief in cases of sickness, but that the organisation of medical relief should be left to the medical men themselves. Medical men in France have therefore welcomed the taking of the distribution of medical benefits under the British Insurance Bill out of the hands of the Friendly Societies.

The French "Approved Societies" and Social Hygiene.

Another analogy between the French and English systems rests in the fact that there are in France also "approved societies." There are three sorts of Mutualist societies. First, free societies, which govern themselves as they choose. These have only a civil status, they can own no corporate property, must obtain a special authorisation to accept a legacy, and are not very numerous or important. Second, *sociétés approuvées*, whose statutes must receive Government sanction. Their expenses or liabilities must be covered by receipts recognised as sufficient. They may possess landed property, they may house their members, and the local authorities must lend them gratuitously a hall in which they can hold meetings. They are freed from certain stamp duties. But, on the other hand, they must invest their funds in Government securities, French railway companies, and other approved stock. Three-quarters of their property may be invested in land. Other measures are imposed by law, all devised to secure the solvency of the approved societies, and to make sure that the members shall receive all to which they are entitled. The State and the local authorities give subventions to these organisations, so that they are more wealthy and stable than any other similar bodies, but they are under such strict supervision and control that they are neither self-governed nor independent. The third sort of Mutualist societies have a programme corresponding to that which the Local Health Committees have imposed upon them by the British Insurance Bill. They consist of persons who, impressed by dreams of social progress, entertain views and promote plans of action that go far beyond the scope of ordinary friendly societies. Their intentions are so good that they are recognised by the State as societies of public

utility, which is a great honour, but offers no financial guarantee. Social hygiene is one of their principal objects. Without interfering with existing sanitary authorities, they endeavour to stimulate the action of such authorities. They try to recruit and provide trained nurses for poor localities, and organize popular lectures on sanitation. They help to bring about congresses and to secure the success of public meetings. They start dispensaries against tuberculosis or alcoholism, and find money to establish sanatoriums. Altogether, they are very ambitious, but their means being limited their action has not given rise to so many complications as might be expected. Still there is a good deal in the object and aims of this third category of Mutualist societies that recalls the social hygiene programme of the Local Health Committees, though the British Insurance Bill goes further and confers greater powers of interference with local authorities, employers of labour, and owners of inhabited property than the French Mutualists possess.

Mutualist Finance and Medical Expenditure.

Though the medical profession looks upon the Mutualists with great suspicion and some apprehension, they are not nearly so powerful as the corresponding Friendly and Benefit Societies of England. It is true they are numerous, though not so numerous as might be imagined, when their orators declaim about their millions of supporters. The Mutualist Societies of France do not number quite two million men, rather less than half a million women, and a little more than half a million children. The grand total just exceeds the figure of three million members. There are also 424,000 honorary members—that is, members who do not participate in the benefits. But their total capital is not much more than £16,000,000, or about £5 10*s.* per head. Dr. Bolliet, of Lyons, at the recent Congress of Medical Practitioners, presented some remarkable reports on the subject; he showed that half the Mutualist Societies did not possess 50 members and would not be able to survive an epidemic or some unusual catastrophe. Yet it is precisely these weak and unreliable societies that offer most of the opposition and raise the loudest complaints when efforts are made to introduce the principle of free choice of the medical attendant. The fact is that the subscriptions raised are altogether insufficient. The average payment to the approved societies does not amount to more than 10*s.* per head per annum. To the free societies the subscription is about 1*s.* more. This shows a falling off, for a few years ago the average was at least 12*s.* a year. The subscriptions paid by the honorary members have also decreased about 10 per cent., and they were estimated at only 10*s.* 8*d.* a year. In Germany the money paid to insure a workman against sickness is considerably above £2 per annum. In these circumstances it is not surprising if the payments made by French Mutualist Societies to their medical attendants only amount to about £162,000 per annum, or less than 8*s.* per patient. The cost of drugs and medical expenses other than the remuneration of the medical attendant does not fall far short of 12*s.* per patient. This outlay has a tendency to increase, while what is given to the medical practitioner is an ever-diminishing quantity. Consequently the medical profession does not hold the Mutualists in the highest esteem, and when the latter make eloquent speeches about the great deeds they intend to accomplish and the social reform that will result, their medical critics cruelly suggest that the first and most urgent reform should be the payment of higher subsciptions.

How it is Proposed to Render Good for Evil.

In 1908 a meeting was held between the representatives of the National Federation of the Mutualist Societies and the Union of the Medical Syndicates of France. M. Loubet, former President of the French Republic, presided, and it was agreed that mixed committees should be created in each department to assuage the conflicts between the medical practitioners and the friendly societies. The result has not been encouraging, for no compromise could be effected, the medical profession standing firm on the principle of the free choice of the medical attendant. This system, they maintain, has for its natural consequence payment per visit and per mile. The medical practitioner, it is urged, should ignore the existence of Mutualist or other similar organisations. At most he must not deal with them except as a sort of banking or collecting institution, which, in exchange for a small commission, will guarantee the payment of the medical fees. He may also aid Mutualist Societies to check malingering or the unnecessary increase of expenses that would arise if a member called on his medical attendant too frequently. In some societies this is checked by compelling the members to obtain a special ticket which they must show the medical officer. As a small charge is made for the ticket the member is less likely to resort to medical advice unless he is in real need of such assistance. This is a very important matter. One of the evils from which a medical officer of a medical aid organisation has to suffer is that members make calls upon his services with absolute want of consideration. It does not matter to the member or to his society how often the medical officer is called upon. But if, as is proposed, the medical officer is paid for every consultation then it would matter very much indeed to them both. Any such abuse would be of financial advantage to the medical officers, for they would have so many more fees to receive. Now, although the Mutualist or Friendly Societies did nothing to protect the medical officer when he was the victim and was unnecessarily overworked, nevertheless the French medical profession generously offered to return good for evil, and declare their readiness to help in establishing a ticket or any other system that will prevent the Mutualist Societies against being mulcted by unscrupulous members who otherwise might extravagantly increase the cost of medical attendance. Further, where abuse is supposed to occur there would be no objection to the nomination by the Mutualists of a medical representative and expert to investigate the case, so long as he observed the medical etiquette in regard to consultations and did not interfere with the treatment of the patients.

Mutualists Accept the Free Choice of Medical Adviser.

In this great struggle the Mutualists are themselves gradually coming round to the views promulgated by the medical profession. As matters now stand, many of them will not consult the medical officer of their society. If they can afford it, they pay fees and choose the private practitioner they prefer, while many of the club doctors hardly receive more than £6 a year, and therefore are not at all worried at the prospect of losing their appointments. In Paris alone there are 50 medical officers of Mutualist Societies who earn so small a sum that they really do not care what happens, at least, so far as their money interests are concerned. It has been calculated that the medical officers in the service of the Mutualist Societies receive from 1*d.* to 6*d.* per consultation, and the members themselves are realising that this is no pay at all. If, as a consequence, the patients are only superficially examined and errors result therefrom it would be difficult to complain. This is so well realised that a number of French Mutualist Societies have now agreed to accept the principle of the free choice of the medical adviser. An agreement is then drawn up and signed between the society and the local medical union or syndicate. A tariff for fees, small operations, accouchements, &c., is decided on according to the financial position of the members of the Mutualist Society or trade union in question. Any practitioner agreeing to these terms is free to inscribe his name on the panel, and the members have the free choice of those who are thus inscribed. Such is the evolution in the terms of contract practice which is actually taking place in France. The French practitioners are naturally anxious that the great insurance scheme proposed for England should not contain any clause that might be interpreted as discouraging the efforts made in France, and made with some measure of success. They view, therefore, the recent amendments with much satisfaction.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Death of the Chancellor of the University of Bristol.

Mr. Henry Overton Wills, first Chancellor of the University of Bristol, died on Sunday, Sept. 3rd, at his English residence, Kelston Knoll, near Bath. For some years indifferent health had kept him in retirement, and he was in his eighty-third year. His fellow citizens have ample reason for keeping him in grateful remembrance, and it is barely two years since the freedom of the city was conferred on

him. It will be remembered that Mr. Wills in 1908 made the foundation of the University possible by his splendid gift of £100,000. In recognition of his interest in the project he was appointed Chancellor of the new University, and although his ill-health kept him away from the various University functions he always maintained a lively interest in everything concerning the University, as various messages testify. His eldest son, Mr. G. A. Wills, is treasurer of the University. At the funeral service held at the Cathedral the University was represented by the Pro-Vice-Chancellor, Professor J. Michell Clarke, and members of the staff; and the robes of the Chancellor's office were laid upon the coffin. Representatives were also present from the Bristol General Hospital and the Queen Victoria Jubilee Convalescent Home, institutions to which Mr. Wills had contributed most liberally.

Bristol General Hospital.

The half-yearly general board of the hospital governors was held on Sept. 11th. The president, Mr. Joseph Storrs Fry, referred in his opening remarks to the loss that the hospital had sustained through the deaths of Lord Winterstoke and Mr. Henry Overton Wills, and also to Dr. H. G. Kyle's motor-cycle accident, mentioned a fortnight ago in these columns. It is gratifying to be able to say that Dr. Kyle's condition shows some improvement. The work done by the hospital is increasing, both in the wards and among the out-patients, as compared with previous years. Mr. Herbert M. Baker, the chairman of the committee, said that the ordinary income had increased by about £200, and that the legacies had also increased. Ordinary expenditure was also, unfortunately, greater by about £600, mainly owing to the increased cost of housekeeping commodities. The extension fund amounts to £42,365, so that a balance of £2635 remains to be collected before the sum of £45,000 is realised. Mr. Baker said that the committee had delayed the beginning of the building of the new wing until it was reasonably sure of the requisite funds. The plans have already been drawn up. The committee has decided to increase the remuneration of the nursing and resident staffs.

Post-graduate Classes in Pathology at Bristol.

During the past summer the University of Bristol made a new departure in the post-graduate teaching of pathology. Professor I. Walker Hall gave a series of lectures and demonstrations to a class of about 20 practitioners at Frome. This class was so successful that it has been decided to hold similar courses at Dorchester and at Taunton during the autumn. A short course of practical demonstrations by the professor and demonstrators of pathology is also advertised to take place at the University during September and October.

A Case of Cerebro-spinal Fever in Bristol.

Recently a child died in Bristol from cerebro-spinal fever, apparently acquired during a holiday visit to the infected area in North Cornwall. No other cases have been reported as a result of this one, but the chairman of the health committee proposes to ask the council to give its sanction to the inclusion of cerebro-spinal fever and acute anterior poliomyelitis among the notifiable infectious diseases for a period of six months, if the Local Government Board approves.

Death of Mr. Henry Robbins Dew.

Mr. H. R. Dew, consulting surgeon to the Bristol Eye Hospital, died at his residence, Stanton Wick House, Stanton Drew, near Bristol, on Sept. 6th, in his seventy-eight year. Mr. Dew was born at Warwick in 1834, and afterwards came to Bristol, where his father was an attorney-at-law. His grandfather, Dr. James Dew, was a well-known medical practitioner of Bristol; his great grandfather was John Dew of Coleford, Gloucestershire; and the family have owned for many generations a manse at Coleford, in which it is said that Charles I. took refuge on one occasion. Mr. Dew received his medical education at St. George's Hospital, and qualified as M.R.C.S. in 1855. Six years later he obtained the L.R.C.P. of Edinburgh. He served in the Crimean war, and was staff assistant surgeon to Lord Raglan. On his return he commenced practice at Bristol, where he soon established a large connexion. He held several public appointments, being at one time honorary surgeon to the Bristol Eye Hospital, surgeon to the Deaf and Dumb Institution, the Blind Asylum, and the Lying-in Institution. About 12 years ago Mr. Dew retired from all active work and took up his residence at Stanton Drew, Somerset. The funeral took place at Arno's Vale Cemetery, Bristol, and was largely attended.

The Tiverton (Devon) Board of Guardians and Pulmonary Tuberculosis.

The Local Government Board has granted permission to the Tiverton board of guardians to treat "consumptives" in huts to be placed in the open ground of the workhouse infirmary, provided that the necessary precautions are adopted.

The Health of Devon in 1910.

The annual report of the medical officer of health for the county of Devon (Mr. G. Adkins), which has just been issued, states that during 1910 8709 births were registered, equal to a birth-rate of 19·2 per 1000, compared with 20·0 for 1909. The deaths numbered 5810, giving a death-rate of 12·8 per 1000, against 13·4 in 1909. The infantile mortality was 67 per 1000 births, against 76 for the previous year. The infant illegitimate death-rate was 17·6 per cent., against 7·1 per cent. for those infants born in wedlock. 1070 cases of disease had been notified, against 1470 in 1909, including 402 from scarlet fever with 8 deaths, 412 from diphtheria with 49 deaths, and 75 from enteric fever with 10 deaths. No case of small-pox was notified. 551 deaths were due to tuberculosis, including 416 from pulmonary tuberculosis. 453 deaths were caused by cancer.

Hospital Saturday at Newton Abbot (Devon).

As a result of the Hospital Saturday collections the sum of £194 has been handed to the treasurer of the Newton Abbot Hospital. This is £28 less than the sum allotted in 1910.

The Paignton Mortuary.

At a recent inquest held in Paignton, the medical man who performed the post-mortem examination complained of the state of the mortuary, which he described as scandalous and filthy. He added that it appeared to him "almost an insult to the dead to take them into such a horrible place." The coroner agreed with these remarks, and the jury added a rider to the same verdict, recommending the district council to erect a suitable mortuary.

Sept. 12th.

WALES.

(FROM OUR OWN CORRESPONDENT.)

The Water-supply in Glamorgan.

WHILE certain parts of the county of Glamorgan, including Swansea, Merthyr, Aberdare, Pontypridd, and the greater part of the Rhondda valleys, have not been affected by the recent drought, there are other parts in which the conditions are more or less serious. The Cardiff supply, which is normally obtained from gathering grounds in the Brecknock Beacons, has had to be supplemented from deep wells owned by the corporation and situated at Ely, within a few miles of the town. From this source about a million gallons daily is available. The watering of gardens with hose-pipes has been prohibited in Cardiff, and the inhabitants have been asked to be as careful as possible in the use of water. Unless there is a sufficient rainfall during the next few weeks, it is anticipated that further steps will have to be taken to conserve the supply. The Swansea waterworks have now been completed by the construction of two covered service reservoirs, each holding two million gallons. The resources of the Swansea waterworks are capable of supplying nearly 70 gallons per head of the population daily.

The Housing Question.

In spite of the acknowledged lack of suitable working-class dwellings in many parts of South Wales, very few sanitary authorities have taken advantage of their statutory powers to provide such dwellings. Amongst the few that have done so is the urban district of Gelligaer near Merthyr. When proposing that the council should take action under Part III. of the Housing Act, 1890, a member of the council stated that in one street of 50 houses in a certain locality there were no less than 420 persons. He attributed the overcrowding to the high rentals which were demanded, so that two or three families were obliged to occupy one house.

Neath Rural District.

The conditions described by Dr. S. W. Wheaton, in his report to the Local Government Board on the sanitary circumstances and administration of the Neath rural district, are most discreditable to the local sanitary authority. The population of the district has increased from 29,000 in 1901 to over 42,000 in 1911, but in only three localities is there any systematic sewerage. In two of these the sewage passes untreated into the tidal river Neath, and in the third the proprietor of a colliery at his own cost has sewered 50 houses and constructed septic tanks and bacterial filters. In the greater part of the district liquid refuse escapes into streams, ditches, or roadside channels, or, after running in surface channels for some distance, soaks into the subsoil. Many of the houses drain into soakaway cesspools, with the result that the ground beneath the dwellings is becoming saturated with filth, which, as Dr. Wheaton very properly states, may have injurious effects for some time even after the premises have been properly sewered. The contents of the privies which abound in the district are removed by contractors, but in many instances the filth is buried in a hole in close proximity to dwellings, and so small is the area available for this purpose that it frequently happens that any attempt at covering it with earth is impossible. Few of the houses have water laid on to them. In most instances it has to be carried by hand from standpipes which are 50 to 150 yards and upwards distant. The smaller sources of supply are liable to pollution. Three years ago an outbreak of typhoid fever involving 26 cases was due to the use of water from old mine workings which had become polluted by surface soakage. Dr. Wheaton recommends the council to proceed at once with the work of sewering the most populous parts of the district, and to dispose of the sewage in such a manner as not to pollute the watercourses. He also advises the council to undertake the scavenging of the district itself in place of the present system of contracting, to provide an efficient hospital for the isolation of infectious diseases other than small-pox, and to give more attention to the condition of the dairies and cowsheds in the district.

Sept. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Donation to Aberdeen Dispensary.

IN response to an application from the directors of the Aberdeen Dispensary the town council has decided to give a donation of £750 to the institution. It was pointed out that over 15,000 cases had been dealt with in the dispensary last year. Many such cases, in the opinion of the committee, should have been treated at the Royal Aberdeen Infirmary, but a large number took advantage of the institution who were quite able to pay for medical advice and medicine. In view of the fact that the dispensary did a great amount of good to the poorer classes of the community, and also that the Lord Provost had intimated that if a liberal donation were given by the town council he could see his way to get a sufficient sum to clear off the present debt of £5000, the committee considered it was justified in recommending the council to give a donation of £750. The institution has not received a donation of any kind from the council during the last 60 years.

Aberdeen Infirmary and Water Charges.

The present charge for water made to the Royal Aberdeen Infirmary was fixed in 1892, and is covered by the moderate sum of £10 per annum. The water committee of the Aberdeen town council considers, however, that since then circumstances have materially altered. From the information before the committee it appears that the quantity of water now used in connexion with the Royal Infirmary amounts to about 14,000,000 gallons per annum, of which one-fourth is used for other than domestic purposes, such as steam heating, mechanical ventilation, hydraulic lifts, laundry, &c. The terms upon which the Aberdeen town council supplies water to public institutions within the city have been under consideration, and after Nov. 30th it is proposed that the infirmary should pay for its water on the following terms: (1) For the water used for the ordinary purposes of the infirmary, such as steam heating, mechanical ventilation, hydraulic lifts, &c., at the rate of one-fourth of the ordinary rate for supplies by meter within the city, as such rate may be fixed from time to time by the council; (2) for the water used for generating steam for electricity, the ordinary rate for supplies by meter within the city. On Sept. 5th a deputation of directors waited on the water committee with reference to the proposed change, when the matter was remitted to the water engineer to bring up a report upon the amount of water used by the infirmary and for what purposes; upon this the water committee promised to reconsider the whole matter.

Montrose Royal Asylum: Proposed Reduction of Attendants' Hours.

At the monthly meeting of the managers of Montrose Asylum and Infirmary Board held on Sept. 6th, a motion to the effect that the hours of the attendants at Sunnyside Asylum be reduced, and the principle of superannuation approved of without the intervention of Parliament, was unanimously carried. It was decided, however, to allow the matter to lie over until the result of the approaching conference on the Asylum Officers' Employment and Superannuation Bill is learned, after which it will be remitted to a special committee for consideration and report.

Arsenic Poisoning at Lamlash.

Last week, in the Sheriff Court at Rothesay, an inquiry was made into the mysterious epidemic of sickness which broke out at the end of April in the village and district of Lamlash in the island of Arran, and resulted in the death of a boy, the other sufferers all recovering after more or less severe illnesses. Investigations showed that death was due to arsenical poisoning, and that it was caused by the eating of a scone made in the bakery of a local firm. The firm instantly took steps to trace the poison, and in this they were assisted by the police authorities and prominent analysts. Arsenic in alarming quantities was found in samples of scones taken from the same batch as that from which the scone eaten by the child was taken. In the course of the evidence it was stated that one scone alone contained enough arsenic to kill three persons. Exhaustive inquiry and analyses of all materials used in the bakery demonstrated that these were all perfectly pure. This led to the belief that the poison got into the foodstuff while that material lay overnight in the prepared state ready for the beginning of the morning's baking operations. The various employees of the firm, as well as the sole partner, were unable to offer any opinion as to how the scones became tainted. The sheriff, in addressing the jury, said the poison could not have found its way accidentally into the scones. He spoke highly of the manner in which the baking business was conducted, as appeared from the evidence, and also of the assistance rendered by the firm and the employees to the authorities in their investigations. He counselled the jury to return a verdict leaving everything connected with the case open. It was then possible for the Crown to take steps subsequently if that course was found justified. The jury returned a simple verdict that the child died from poisoning by arsenic, adding that they believed the firm to be entirely free from blame in the matter.

Dunoon Convalescent Homes.

The forty-second annual report of the directors of the West of Scotland Seaside Homes, Dunoon, has just been issued. During the past year 4993 patients were admitted, exclusive of children under two years of age. Of these, 4690 were restored to health, 173 relieved, 112 did not improve, 1 died, and 148 remained in the homes. The total number of persons admitted since the homes were opened in 1869 was 135,179. These homes undoubtedly fulfil a very useful function in admitting patients not fit for their work and not yet ill enough to be admitted to hospital. The majority of the male patients during the year were skilled workmen, while young mothers and warehouse and factory girls formed the majority of the female patients. The ordinary income for the year amounted to £7581 and the ordinary expenditure to £6607.

Medical Officer's Report anent Ythanwells and Corse Schools.

The Ythanwells school board met on Sept. 2nd, when the chief medical officer's report on the schools was submitted. In it the attention of the school board is drawn to the condition of the playground of the Ythanwells school, as

follows: "The playground was in a very bad condition, and was more like a bog than a playground." Of the Corse school it is said: "The heating of the senior class-room is insufficient; there are no shelter sheds for the children; and the desks in the infant school are quite insufficient and ought to be replaced by up-to-date ones." Commenting on the report, the board felt that if the recommendations were to be carried out it would cost several hundreds of pounds. With regard to the heating of the senior class-room at Corse, it was pointed out that the board had divided the schoolroom by a partition and had had an extra fireplace put in, so that in the place of the one fireplace, which had been deemed sufficient for many years, there were now two. With reference to the playground at Ythanwells, the board took exception to its being called a bog, and considered it satisfactory. After discussion the chairman proposed that, in view of the state of the school fund and the small and steadily decreasing valuation of the school district, and the ever-increasing school rate and demands of the department, involving additional heavy expenditure, the school board take into consideration at a future meeting the discontinuing of Ythanwells as a school district, under the provisions of Section 22 of the Educational (Scotland) Act, 1908; and alternatively, that an all-round reduction of salaries be considered, so as to keep the school rate at a reasonable level. The meeting agreed to have up-to-date desks supplied to the infant department at Corse school.

Sept. 11th

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Lunacy in Ireland.

It is terrible to note that whereas in 1880 there were only 250 insane per 100,000 population in Ireland, the proportion has continuously risen (though less markedly in the past few years) until, according to the recent report of the Inspector of Lunatics on Jan. 1st, 1911, the figures reached 558 in each 100,000.

Post-graduate Classes at Trinity College, Dublin.

The autumn post-graduate medical course for 1911 will begin on Sept. 25th. The course will be conducted on similar lines to those of past years. Instruction will be given in the various departments of medicine and surgery, and particular attention will be paid to special subjects, such as ophthalmology, laryngology, and dermatology. There are also classes in X ray work and cystoscopy. The course is primarily intended for general practitioners, and the aim of the teachers is to make the demonstrations as practical as possible. The time-table is so arranged that each member may attend all the classes. Work generally begins at 8.30 A.M. and is continued with an interval for luncheon till 5.30 P.M. The social side has not been entirely overlooked, as arrangements have been made by which a limited number of members of the class can reside in College rooms and dine in hall. This privilege is open to all members of the class as freely as to graduates of the University. A complete syllabus may be had on application to the honorary secretary.

Flies and Disease.

Sir Charles Cameron, medical officer of health of Dublin, has persuaded the public health committee to pay for the destruction of flies. Paper bags have been distributed, each of which is capable of holding some 12,000 flies, and the committee pays a few pence for each bag returned full of dead flies. This seems to be attacking the fly nuisance from the wrong end, for, as a correspondent points out in the daily papers, if the streets, lanes, and courts of the city were kept clean there would be comparatively few flies to deal with. In spite, however, of much criticism, the scavenging of Dublin is still very imperfectly performed. Meantime the death-rate is 27·6 per 1000.

Health of Belfast.

Advanced copies of the annual report of Mr. W. H. Bailie, medical officer of health of Belfast, have just been issued dealing with the year 1910. It is a pity this report is belated, as the population of Belfast, on which the vital statistics are based, is taken as that of the old approximate figures of the Registrar-General, 391,167, while the real figures, as given three months ago—after the Census of 1911—are 385,492; that is, the actual population of Belfast is nearly 6000 less than the estimated one. Taking the figures as they are given in the report, the natural increase of population—i.e., the number of births in excess of deaths—was 3604, being 268 less than in 1909, and 172 less than the average for the ten preceding years. The birth-rate of Belfast, like that of most other large cities, shows a steady and continuous decrease from 33·4 per 1000 in 1881 to 27·8 per 1000 in 1910. 7284 deaths from all causes were registered; which is equivalent to 1 in 53, or 18·6 per 1000 of the population, and is 0·4 higher than the rate in 1909, but 1·8 below the average rate for the ten years 1900–1909. The number of deaths from zymotic disease was 1073 (562 in excess of those in 1909, and 267 in excess of the average for the ten years 1900–1909). The rate (2·7) is 1·4 per 1000 higher than in 1909, and 0·5 higher than the average for the preceding ten years. This increased zymotic mortality is due to an epidemic of measles from which 504 deaths occurred, corresponding to a rate of 1·3 per 1000. There is a reduction in typhoid fever (only 18 deaths occurred in 1910), only one death occurred from typhus fever, and although 734 cases of scarlet fever were notified (there being an epidemic which began in October, 1909, and continued during 1910, largely among children of school age) only 18 died, a mortality of 0·04 per 1000. Diphtheria caused 27 deaths out of 233 cases notified, a mortality of 11·1 per cent. More than half of the cases of puerperal fever notified (16) occurred in districts where the practice of unqualified midwives is most prevalent. Eleven of the cases were attended by "handy women," and in only two of these 11 was a medical man in attendance from the beginning. Nine deaths occurred. It is hoped that the clauses in the contemplated Belfast Corporation Bill dealing with this subject will put an end to such evils, or at least will greatly mitigate them. 259 deaths (46 in excess of 1909) occurred from whooping-cough, the annual rate of mortality being 0·6 per 1000 of the population, while there were 504 deaths during the year from measles, being equal to a rate of 1·3 per 1000. This is almost the highest rate for 30 years in Belfast, the exceptions being the years 1885, 1890, and 1894, and the epidemic was prevalent all over the city. 241 deaths were due to diarrhœa. 929 cases of tuberculosis were notified pursuant to the Tuberculosis Prevention (Ireland) Act, 1908, and in addition 244 cases were notified voluntarily. 825 deaths occurred in 1910 from tuberculosis, as compared with 811 in 1909, the rate in both instances being 2·1 per 1000 of the population. It is unfortunate that the disease seems not to be decreasing in Belfast. In reference to infantile mortality, the rate was 143 per 1000 births (1553 deaths), as compared with 139 (1510 deaths) in 1909; figures showing an increase of 4 per 1000, which is very disappointing. It is unfortunate that practically two-thirds of the milk-supply of Belfast is produced in districts outside the city, which are beyond the jurisdiction of the health authorities. Attention is again drawn to the abominable double-tenancy houses, and the report advises "the erection of specially designed houses where one or more rooms can be let to people who are unable to pay more than from 1s. to 2s. per week for rent," adding that power should be "granted to the local authority enabling them to prevent owners letting houses to more than one family where sanitary conveniences are not provided for each letting." This annual report on the health of Belfast for 1910, though less elaborate and exhaustive in tables, diagrams, and in comment than some of previous years, is a valuable document. It occupies 157 pages, as compared with 230 in the report of 1909 and 198 pages in that for 1908. An index would have been a decided improvement.

Dungannon Workhouse.

As a result of a recent Local Government Board inquiry at Dungannon workhouse, that Board state that, in their opinion, the hospital arrangements require the careful consideration of the board of guardians with a view to their improvement, and that measures should be taken to remedy defects which have been shown to exist in the management of the infirmary.

Death of William Twigg, M.D. R.U.I.

Dr. William Twigg died on Sept. 11th, after a very long illness, at his residence, Northland-road, Dungannon. The

deceased gentleman, who had attained an advanced age, was a member of an old county Tyrone family. Qualifying in 1861 as L.R.C.S. Irel., he took the M.D. of the Queen's University of Ireland in 1862, and immediately began practice in Dungannon. In 1864 he was appointed medical officer of the union workhouse and fever hospital in that town, a position he held until his death. He had also been Surgeon-Lieutenant-Colonel of the Mid-Ulster Artillery for many years, retiring only in 1901, with permission to retain his rank and wear his uniform. The deceased gentleman had been a useful member of the old board of Dungannon town commissioners, and often acted as churchwarden and select vestryman in the local parish church. He had a large private practice and was greatly respected. He was buried in Dungannon on Sept. 13th.

Death of Judge McIlroy, K.C.

Great regret has been expressed on all hands at the sudden death of Mr. Robert McIlroy, K.C., recorder of Belfast and county court judge for Antrim, which occurred from the rupture of an aneurysm on Sept. 6th. As the judicial authority before whom cases of workmen's compensation were tried, he had much work to deal with in a great city like Belfast, and his decisions gave the utmost satisfaction not only to workers, employers, and lawyers, but also to medical men who appeared before him. His knowledge of law and his care and patience were supplemented by sound sense and humour. He was a distinguished former student of Queen's College, Belfast, and at the last annual dinner of the Ulster Medical Society he was one of the invited guests, and made a very able speech.

Sept. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Cremation.

THE cholera epidemic, which, starting in the East, has extended to this country, has given rise to animated and wordy discussions with regard to cremation. The partisans of cremation regard it as the sole means of securing by one procedure both the disposal of the bodies and safety from ultimate contamination of the soil. Its opponents, however, raise many objections, of which the principal one is that incineration, in destroying the corpse, destroys also every trace of poison, and thus promises immunity to criminals. In support of their case they cite arsenical poisoning, a condition that presents all the symptoms of cholera. If the bodies were cremated, toxicological investigations would become impossible in such cases. On the other hand, in the case of an accused party, or even of one suspected of this crime, earth burial would leave it possible for the accused to prove his innocence, whereas cremation would make it impossible to dissipate entirely the suspicion that always clings to the accused. Those who attach weight to this objection demand, therefore, that every cremation should be preceded by a necropsy. But here a fresh difficulty obtrudes itself, in that a necropsy in cases of poisoning offers no precise data unless accompanied by a toxicological examination, which may require three months. Consequently, a law which entailed a necropsy with a toxicological examination prior to cremation would necessarily render cremation impossible, so that such a law would be equivalent to a prohibition of cremation itself. Attention has therefore been centred on searching for a means capable of affording a sufficient guarantee without imposing too great obstacles to the practice of incineration. M. Sicard of Marseilles, who has paid special attention to this question, has made experiments on the humours of the eye, the bile, the urine, and the cerebro-spinal fluid, and has found the quantity of poison present in the eye to be even greater than that found in the other media of the body. If 30 drops of Fowler's solution are injected into a rabbit weighing 500 kilogrammes, 10 drops every eight hours, and the animal is killed eight hours after the third injection, the quantity of arsenic recovered M. Sicard finds to be as follows: in the brain, 0·3012 mg.; in the kidneys, 0·024 mg.; in the liver, 0·06 mg.; and in the media of the eye, 0·071 mg. M. Sicard, then, proposes to remove by aspiration from a corpse intended for cremation the following physiological body fluids: the aqueous and vitreous humours, bile, urine, and cerebro-spinal fluid. The fluids should be kept in small phials, which can be placed in the funeral urn or the box intended for the ashes. Thus important evidence will be preserved, so that practically an exhumation can be made later if necessary. At the present time, says M. Sicard, the use of only the bile and the urine is to be recommended, for it is difficult to induce the family to agree to meddling with the eyes; and, on the other hand, researches demonstrating the passage of the substances absorbed into the cerebro-spinal fluid in the normal condition are not sufficiently numerous to justify the drawing of any decided conclusions in so grave a question. A part of the substances taken into the organism is recoverable from the bile, and the kidneys are the most active and powerful agents in the elimination of poisons. Nearly all poisons pass off in the urine, and for many of them it is the principal channel of elimination. The urine could be collected from a corpse by means of an aspiratory puncture with the kind of aspirator used in lithotrity, or recourse could be had to aspiratory puncture of a vein, which would permit of obtaining a certain amount of blood or of sero-sanguineous fluid. But M. Sicard prudently adds that no experiment should be accepted as definitive before the advantages that he claims for it have been confirmed by other authors.

The International Sanitary Conference, 1911.

The International Sanitary Conference to revise the provisions of the Convention of 1903 to prevent the invasion and propagation of plague and cholera will take place at Paris on Oct. 10th next.

Sept. 12th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The New Medical Act.

THE work of the Union of the Austrian Medical Corporations was concluded a few weeks ago, and the outcome in the shape of resolutions has now been brought to the notice of the Government. The paramount demand of the profession is, that before the final framing of the proposed new Medical Act (Aerzte-Ordnung) practising members of the profession should be asked for their opinion, and not only medical officers of health, who with us are somewhat in the position of Government officials. The profession demands that compulsion to practise shall be abolished as it is useless to the public and a menace to the profession, and that doctors of medicine shall be made independent of lay opinion and lay judgment in all affairs pertaining to the practice of medicine. The profession also protests against being placed in the dilemma that one law demands from its members absolute professional secrecy, whilst another clause of the same law makes this secrecy illusory. They demand that the new law should abolish Section 359 of the present Civil and Penal Code, by which a medical man is forced in certain circumstances to give information against a patient who has sought his professional help. Such a law makes the medical man act the part of a police spy—a position against which the entire profession vehemently remonstrates. The confidential nature of the relations between the medical adviser and the patient must be carefully guarded by the new law, as the continuance of professional secrecy is of the highest importance to the public, the State, and the medical practitioner.

Use of Antivenomous Serum in the Army.

In the southern parts of the Austrian Empire there are several kinds of poisonous serpents, and the soldiers stationed in these districts are frequently bitten; last year four men lost their lives and seven were seriously indisposed from this cause. The chief medical officer of the army corps stationed in this part of Austria has recently ordered the use of Calmette's serum against serpent-bites, and a fairly large stock of it has now been issued to each regiment in the south. The men and the medical officers are instructed how to use it, and regular inspections of the stock, as well as lectures on the natural history of the poisonous kinds of serpents, are provided for. In addition to the serum, the various appliances necessary for its proper application have

been supplied to the army hospitals. Much reliance has hitherto been placed on the treatment of such injuries by alcohol and the application of permanganate of potash. The present unusually protracted period of hot, dry weather has been very favourable for the multiplication of serpents in the localities infested by them, so that the extra precautions were not superfluous.

The Austrian Society for the Prevention of Diseases.

A society for the prevention of diseases and epidemics (Gesellschaft zur Bekämpfung von Volksseuchen) has been founded in Austria, and will act in concert with the Public Board of Health and the Sanitary Department of the Ministry of the Interior. Its aims are to supplement the endeavours of the public authorities in combating diseases, to improve the general circumstances of patients and their families belonging to the poorer classes, to provide adequately trained attendants for the care and nursing of patients during epidemics, and to organise medical help and hospital accommodation in non-epidemic times. The society will also encourage investigations relative to the spread of diseases, as well as their prophylaxis and treatment, and will, as far as possible, make the general public acquainted with the results of these scientific researches. The society will endeavour to improve our knowledge not only of the so-called epidemics, but also of all diseases which prevail extensively among the population. All infectious diseases, including sexual diseases, will therefore receive attention from the society. The necessary funds are to be obtained by lotteries, by "hospital days," by collections, by charitable grants, and by Government subsidies. The present intention is that the scientific part of the work shall be divided amongst all practitioners in the country through the instrumentality of the local medical unions and councils. It is thought possible that an international society for the study of epidemic diseases may in the course of time be called into existence. The present menace of cholera, which threatens the whole south of Europe and also all the commercial centres of the civilised world, is a valuable instigation to the task of the society, in so far as it shows that much good work may be done within the limits of a reasonably restricted programme.

The Austrian Section in the Hygiene Exhibition at Dresden.

Great dissatisfaction is felt in this country with reference to the appearance of the Austrian Section of the International Hygiene Exhibition in Dresden. The actual condition of public hygiene and practical medicine, as well as the general position of this country in all matters pertaining to public health, are seriously misrepresented there, and several independent observers have not been very lenient in their criticism of the matter in our journals. The fault was, from the beginning, the predominance of what may be called bureaucratic influence, whilst the medical profession as a whole was in no way considered by the Government when preparations for the exhibition were going on. Remonstrances coming from non-official persons are not much thought of by our officials, and it has required an expression of public indignation to call the attention of the responsible authorities to the unsatisfactory state of this portion of the exhibition.

Sept. 11th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The Cholera Epidemic in Italy.

A CHANGE for the better is now manifest in the cholera-visited cities and communes of Italy. Leghorn has hitherto been the greatest sufferer, thanks to its insanitary condition and the supineness which left to local initiative and intervention what ought to have been anticipated by direct measures inspired and carried out by the Central Office. Leghorn has actually reduced by more than one-half the percentage of reported seizures and deaths. The maritime communities south and north of that seaport also give improved returns, while the landward towns, particularly such as Florence, Siena, and Lucca, are still practically immune. As in all such visitations, the predisposed of the population, the "candidates," so to speak, are picked off first, and thereafter the less predisposed, having profited by the warning, have either betaken themselves to healthier localities or have adopted measures, reinforced by a more vigilant sanitary surveillance, to fortify themselves against attack. With this, panic subsides, and a powerful auxiliary of the disease is thus removed from the scene of its operations. Cholera may now be said to be in full retreat.

The "Congresso Forestale" at Turin.

At Bologna in 1909, at Florence last year, and now at Turin, in connexion with the exhibition and the *festa* in commemoration of the fiftieth birthday of the "Third Italy," the reafforestation of the country has been the subject of largely attended congresses, at which the crying necessity for extensive and systematic silviculture was amply discussed. Like all the States along the Mediterranean seaboard, Italy has suffered disastrously by the reckless tree-felling, uncompensated by tree-planting, prolonged through centuries, till her condition has become only less pitiable than that of Spain, which lost her mercantile marine by the improvident using up of her timber and the reduction of the majestic forests, eulogised by Martial, to naked sierra or thinly clad prairie. Germany and Austria-Hungary have shown Italy the example of jealously conserving their forest growth, while Switzerland, driving home the lesson, has utilised Italy's own invention, that of electro-dynamics, by turning the water-power evolved from the rivers to the development of the lucrative steel and iron industry. This water-power is kept going by the enlightened silviculture which, by its equable production and storage of moisture, has made the Swiss side of the water-shed a perennial reservoir, while that of her southern neighbour is prolific only in autumnal floods, which leave the rivers, after their short-lived repletion, little better than gravel-pits for nine months of the year. Italy's climate, too, like that of Spain and Greece, has changed for the worse by the denudation of her hillsides—incurring in that, as in so many other directions, the nemesis of what Virgil calls the "justissima tellus," which, loyally treated, repays the cultivator with blessings ample and unfailing; which, on the other hand, neglected or abused, visits such treatment with relentless retribution. All this, and much more, recapitulated with commanding eloquence by the ex-Premier Luigi Luzzatti, who presided at the Turinese Congress, led up to a reassuring demonstration of what an awakened Italy is now doing to atone for her improvident past—a demonstration confirmed and illustrated by the able and accomplished Minister of Agriculture, Signor Nitti, who enlarged on the intimate dependence of the country's water-supply on the maintenance of its forest growth, and showed how public hygiene is not less interested in the problem of reafforestation than the national resources generally. The proceedings, carried into the subsequent sittings, evoked much valuable comment on the various methods of reclothing the despoiled uplands, while formulating practical suggestions for meeting the financial difficulty in bringing the pastoral rights established in those uplands under the control of Government by compensation or redress.

Sept. 10th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Hungary.

Dr. Magyarevics, chief medical officer of the city of Budapest, speaking in the Medical Society on the subject of cholera, said that three cases of the disease had been recently notified in Budapest, but there was not as yet any appearance of its extending further. In Mohacs, where about 25 fatal cases occurred in 1910, there had not been a single case of cholera notified since the beginning of the present year. The vigorous efforts of the board of health in checking this outbreak deserved the highest praise. Dr. Magyarevics further said that in his opinion quarantine and detention camps were of little if any value for the prevention of cholera. The poorer classes required special attention, and there ought to be full disclosure of the facts as soon as cases appeared. No method of treatment giving satisfactory results had been discovered, although intestinal antisepsis promised well; all water should be boiled, no uncooked food should be eaten, and the contents of the stomach should be kept acid by the drinking of lemonade or lime-juice, or else of water or tea containing a little diluted hydrochloric acid, because the spirilla of cholera could not

live in an acid medium. The water-supply should be carefully guarded; and all drains, latrines, cesspools, and places where filth was apt to accumulate should be cleaned and disinfected. In the report of the public health board of the city of Budapest for 1910 Dr. Magyarevics has made an exhaustive study of the present state of knowledge relative to protective inoculation against Asiatic cholera. The principal conclusions to which his inquiries have led him were as follows: (1) When spirilla of cholera were subjected to autolytic digestion in an aqueous fluid the receptors became separated from the bacterial cells and might be filtered in solution; (2) the subcutaneous injection of such free receptors into the human subject was free from any danger and produced only slight general reaction; and (3) the method was therefore a practical one for producing a cholera-immune serum in man.

Tuberculosis and Poverty.

Much valuable information relative to the prevalence of tuberculosis among the poorer classes will be found in a small book which Dr. Berkovics has published on the various problems involved in the prevention of tuberculosis. Prominence is given to the fact that every year in Hungary this disease causes 70,000 deaths, or one-seventh of all the deaths. The figures show that a close relation exists between the social position of the patients and the number of deaths. It is found that four times as many cases occur among the poor as among those who are in comparatively favourable circumstances, and Dr. Berkovics says that this makes the problem of limiting the malady a part of the larger social problem of dealing with poverty. The efforts to limit the disease are discussed under two principal heads—namely, the public control of general health conditions, as exercised in cities, and the more immediate practical efforts directed to the medical care of infected persons. An idea of the prevalence of the disease, modified somewhat by the increased attention given to it in recent years, may be gained from the following statistics. The total number of patients treated in 1900 was 3728, in 1905 it was 4910, and in 1910 it was 5344. The expense has also about doubled, rising from 1,200,000 kronen in 1900 to 2,000,000 kronen in 1909. The most promising step that has been taken for the improvement of existing conditions was the organisation in 1902 of a central committee for establishing hospitals for tuberculous patients. The chief problems recognised are the destruction of the bacilli and the separation of tuberculous patients from other persons. The inherent difficulties of these two problems are increased by the presence of poverty, crowded habitations making infection more frequent among people who have no proper means of caring for the sick.

Acute Articular Rheumatism in Children.

Dr. Gross, writing in the *Orvosok Lapja* of August 17th, enumerates quite a goodly number of authors who have reported cases of acute articular rheumatism in very young infants, although it is known that this condition is comparatively rare in children several years of age. In his opinion the disease may perhaps be transmitted with the milk of the nurse. The incubation period in such cases is at least four days; the duration of the disease is between two and four weeks; and both the duration and the severity of the disease are less in infants as compared with adults. Implication of the pleura and of the nervous system (chorea) is of frequent occurrence. This has been reported by Baudelocque, by Rilles and Burthez, and by others. Picot found that 50 per cent. of the cases observed by him were complicated with pericarditis, while Bokay in Budapest asserts positively that the heart of every rheumatic child is found to be attacked sooner or later. Dr. Gross observed in one case a rather rare complication in the form of an effusion into the maxillary joint.

Sept. 11th.

THE DEVIZES (WILTS) HOSPITAL.—A tender for £1838 has been accepted for the enlargement and alteration of the Devizes Hospital. This is to be erected as a memorial to the late King and also as a Coronation Memorial. About £2000 has been subscribed for the scheme, including a gift of £1000 from Mr. Grant Meek, the chairman of the hospital committee.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

The Attack on Dr. Wiley.

THE country at large has taken a long breath of relief at the collapse of the case against Dr. Wiley, whose activities against adulterated food had made him a host of powerful enemies; so powerful, indeed, that they had succeeded in foisting on him a colleague who was able completely to nullify his prosecuting work. The main force at work against Dr. Wiley is thought to have emanated from the fruit packers of California, who maintained that the prohibition of the use of sulphur dioxide for bleaching tinned fruit would damage their industry to the extent of £2,400,000 annually. Another strong party against Dr. Wiley were the manufacturers of tomato ketchup, who were anxious to use sodium benzoate in their sauces, their contention being that the salt was not inimical to health. Dr. Wiley, however, pointed out that its use enabled criminally careless manufacturers to incorporate floor sweepings and other refuse in their products without the possibility of fermentation betraying the presence of dirty ingredients or foreign material. Thoroughly to understand the situation it must be remembered that there are millions of people in the United States who will not use a sauce that contains alcohol, one of the best of preservatives. It is therefore necessary for the makers either to go to the expense of absolutely pure and fresh ingredients, sealing them up while hot, or to check fermentation by some chemical preservative; for, above all, it is indispensable to their trade prospects to be able to advertise the absence of alcohol.

The Quarantine Investigation.

One of the most disheartening facts in this country is the way in which public officials are harried for purely personal, political, or business reasons. The attack on Dr. Wiley is an instance of the last named. The charges against Dr. Doty, health officer to the port of New York, of inefficiency and neglect of duty are an instance of political animosity that fortunately has failed. A leading article in a morning paper, usually in general sympathy with the attacking party, on August 24th spoke of the resulting investigation as "reassuring, bringing out clearly the efficiency, the comprehensive sense of responsibility, the adequate and enlightened and far-reaching methods of the man upon whom, more than upon all other instruments of protection, the country depends for safety from imported pestilence. How unwise and shameful is the warfare!" Citizens and visitors alike are pleased and reassured by the result of this investigation.

Abolition of Public Drinking Cups.

The Sanitary Code ordinance, which comes into force in New York on Oct. 1st, abolishes common drinking cups in public places, hotels, public schools, railway stations, and theatres. The large hotels will either serve water free on demand in the restaurant or bar, or provide maids to serve water from the hotel fountains in glasses to be carefully washed after each individual use. An ingenious penny-in-the-slot machine will solve the problem for the railway stations, and school children will be obliged to carry individual cups. Difficulties may arise in factories, as the law forbids the loan of a cup by the owner.

Imitation Health Board Inspectors.

Grocers and butchers in outlying boroughs of New York have been victimised by bogus inspectors from the health department, who in return for payment for supposed advertising space in an imaginary health publication, promised the tradesmen immunity from prosecution for violation of health ordinances regarding the protection of meat and fruit from street dust. It is difficult to sympathise with the victims, who were thus seeking to evade wise sanitary regulations, but the law protects even such rascals, and the impersonators will be dealt with severely when caught.

Sale of American Patent Medicines.

Patent medicines to the amount of £1,400,000 were exported from the United States last year. Cuba is the largest customer to the extent of £84,000, Canada coming next with purchases amounting to £67,000. China swallows some

£6000 worth of American patent medicine, and the Philippines about £24,000. It is not uninteresting to learn that aphrodisiacs, real or imaginary, command the largest sale in the tropics.

New Superintendent of Johns Hopkins Hospital.

The successor of Dr. Henry M. Hurd as superintendent of Johns Hopkins Hospital, Baltimore, is Dr. Winford H. Smith. He is a graduate of the medical school attached to the University, having taken his degree in arts at Bowdoin College, Maine. Dr. Smith has had much hospital experience in Cleveland, Ohio, in Hartford, Conn., and in New York, where for two years he was superintendent of Bellevue and the Allied Hospitals.

Death of a New York Physician.

Dr. Herman P. Bender, a physician in extensive practice in the borough of Brooklyn, was run over recently by a racing motor-car as he was alighting from a tramcar on his way home from a professional call and instantly killed.

Crowding of Tuberculosis Sanatoriums.

New York residents who may have been ordered by their physicians to go to a sanatorium for proper treatment of incipient tuberculosis have found it impossible to comply on account of the lack of room at these institutions; all are overcrowded and there are long lists of waiting applicants. Mr. Philip P. Jacobs, secretary of the National Association for the Study and Prevention of Tuberculosis, states that there are 30 000 cases registered in New York alone (out of a probable total of 50,000), while there are but 3000 beds in city institutions reserved for the tuberculous. Where a patient desires to pay, say, £2 a week, he finds it more difficult to obtain accommodation than the absolute pauper. There is a good opportunity for commercial enterprise, according to the secretary, to open sanatoriums where decent board and lodging might be furnished at £3 a week.

Unusual Resistance to Electric Current.

A negro convicted of wife murder was executed at Eddyville, Ky., on August 23rd. Although of frail build, the first application of a current of electricity of a voltage of 2500 caused him to burst the retaining straps and fall upon the floor unconscious. He was re-strapped in the chair and the current was passed through his body for 28 minutes before life was pronounced extinct.

Sept. 6th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Hospitals Bill for New South Wales.

THE Labour Government of New South Wales is taking an active interest in hospital questions. It proposes to remove the portion of the Sydney Hospital building that abuts on Macquarie-street and to build a new wing at the rear in what is known as the Domain. Mr. Flowers, the Chief Secretary, is submitting an extensive memorandum to the Cabinet covering hospital management in general. It is proposed to make pulmonary tuberculosis a notifiable disease and to provide homes and sanatoriums. The establishment of Lock hospitals will also be recommended, and the care of convalescents will be outlined. The memorandum will discuss the possibility of establishing (1) special fever hospitals; (2) cancer hospitals; (3) ophthalmic hospitals; (4) skin hospitals; and (5) epileptic hospitals. There are two State hospitals already in New South Wales, and the Sydney and Prince Alfred Hospitals are practically State institutions.

Curious Double Tragedy.

A fatality occurred recently in a medical ward at the Melbourne Hospital owing to a patient drinking by mistake a solution of carbolic acid instead of medicine. The patient suffered from goitre, and it was not clear that the poison was directly responsible, death being apparently from shock. The patient from the next bed, a girl aged 17 years, gave evidence at the inquest, and the following day drowned herself in the river without any apparent reason.

The Public Health Department in Victoria.

Extensive reorganisation of the Victorian Department of Public Health is in progress. Dr. A. A. Brown, superintendent of food for export, has been joined to it with his staff, and the criminal investigation analyst and his staff will also be under its direction. It is probable that before long the board will be reconstituted.

Federal Quarantine.

Dr. W. Ramsay Smith has resigned the office of Chief Health Officer for South Australia, and Dr. W. J. Gething will in future hold the appointment under the Federal Director of Quarantine. A new appointment of Superintendent of Quarantine for Victoria will also be filled shortly at a salary of £650 per annum. It is stated that Dr. B. H. Morris, the Director, will leave shortly for a six months' tour of inspection of the quarantine regulations and arrangements elsewhere.

The British Medical Association.

At the annual meeting of the South Australian branch on June 25th Dr. W. T. Hayward, the retiring President, moved the following resolution, which was carried:—

That in the opinion of this branch it is desirable that negotiations should be entered into with a view to the amendment of the constitution of the British Medical Association so far as the Australian branches are concerned.

Copies of this are to be sent to all sister branches in Australia, accompanied by a memorandum consisting of four paragraphs, the first two of which are as follows:—

1. There is no suggestion of any body separate and distinct from the British Medical Association, but only for autonomy on distinctly Australian matters. The fact that it was proposed by Dr. W. T. Hayward, one of the founders of this branch, should be sufficient guarantee of this. To use political terms, the ideal is for a federation of self-governing branches, whereas at present the branches are like Crown colonies negotiating through the Colonial Office.
2. Such autonomy is urgently required, in order that the profession may unitedly deal with questions of contract practice, hospital abuse, medical defence, &c., as outlined by Dr. G. E. Rennie's resolution carried at the Australasian Medical Congress held at Adelaide.

The suggestion will probably be favourably received in all the States, as it has long been felt that local self-government is requisite.

Health of Melbourne.

The annual report of the city health officer gives the population of the city (exclusive of the suburbs) as 100,000, with a death-rate of 12·4 per 1000 and a birth-rate of 22 per 1000. The infant mortality figure (115 per 1000) is appreciably higher than for the preceding nine years. Melbourne city has a typhoid fever mortality of 8 per 100,000, as against 4·4 in London. The death-rate from tuberculosis was 113 per 100,000, as against 266 during the period 1891–95. Food samples showed little or no adulteration; 194 of 213 samples of milk were up to the standard. The bacteriological report stated that the milk-supply as examined in the laboratory was more than four times purer in 1910 than in 1907. No sample was found to contain tubercle bacilli.

Coronation Honour.

The list of Coronation honours included the name of a well-known Melbourne medical man, Dr. J. W. Barrett, who received the Order of C.M.G. Dr. Barrett's work in connexion with the Melbourne University council and his assistance in many philanthropic and artistic movements have been unsparingly rendered for a number of years. He is a graduate of the University of Melbourne, but was for some time a demonstrator of physiology at King's College, London.

Prevalence of Syphilis.

By the courtesy of Dr. J. W. Barrett an advanced copy of the report, presented to the Victorian Government, of the result of a year's impersonal investigation of syphilis in the metropolitan district of Melbourne, has been placed at my disposal. The report states that Dr. B. B. Ham induced the Government of Victoria to make provision for a collective investigation of the prevalence of the disease throughout the area in question by means of the Wassermann test. An advisory committee was formed, with Professor H. B. Allen as chairman, and Dr. Ham, Dr. Barrett, Dr. K. Hiller, and Dr. A. Jeffreys Wood. Dr. Ernest Jones being subsequently invited to join the committee, and circulars were issued to all medical practitioners within the metropolitan district inviting them to forward samples of blood from every case diagnosed as syphilis or open to suspicion of syphilis. A schedule was given not only of ordinary syphilitic manifestations, but of diseases and occurrences in adults, children, and infants, in the sane and the insane, in connexion with childbirth, &c., which, in the opinion of the

committee, should cause the test to be applied. The reports were to be impersonal, and a fee was paid for each report. Dr. Hiller performed all the tests, with assistance in collateral work in the later stages by Dr. H. Douglas Stephens. The response from the profession was very large, 5000 distinct cases being reported. In addition, Dr. Barrett during four months submitted to Dr. Hiller's testing every case attending his clinique at the Eye and Ear Hospital as in-patient or out-patient for any cause whatsoever. The main outcome of these investigations is as follows:—Out of 5000 cases reported (not including those of Dr. Barrett) 1900 gave a positive reaction, and over 400 a partial reaction. Experience has shown that out of 100 cases of syphilis, only about 60 will give a positive reaction; so that 60 positives represent 100 cases of syphilis. Therefore, 1900 positives represent 3167 cases of syphilis, or 63·3 per cent. out of the 5000 reported. On the metropolitan population of 600,000, this means that more than 0·5 per cent. were found to be syphilitic. The general figure for Melbourne is a multiple of the 0·5 per cent. found by Dr. Hiller, but exactness has not yet been attained. The gravity of the matter is beyond question, though there is no reason to suppose that Melbourne is in worse case than other large cities, and the advisory committee is convinced that the investigation must be continued. The collective investigation so conducted is the most extensive and important accurate research into the prevalence of syphilis that has yet been conducted in any part of the world.

August 12th.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Gratz:* Dr. Josef Schaffer of Vienna has been offered the chair of Histology.—*Innsbruck:* Dr. Franz Ballner, *privat-docent* of Hygiene, has been granted the title of Extraordinary Professor.—*Munich:* Dr. Süpfler of Freiburg has been recognised as *privat-docent* of Hygiene and Bacteriology.—*Palermo:* Dr. Nicola Pende of Rome has been recognised as *privat-docent* of Internal Pathology.—*Parma:* Dr. Roberto Pignatari has been recognised as *privat-docent* of Ophthalmology.—*Prague:* Dr. F. Samberger, *privat-docent* of Dermatology, and Dr. J. Cisler, *privat-docent* of Laryngology, have been granted the title of Extraordinary Professor.—*Rome:* Dr. Pietro Imbriaco of Florence has been recognised as *privat-docent* of Operative Medicine.—*St. Petersburg* (*Military Medical Academy*): Dr. D. D. Popoff has been appointed to the chair of Midwifery and Gynæcology in succession to Dr. Lêpêdeff. *Sienna:* Dr. Bernadino Lunghetti of Bologna has been recognised as *privat-docent* of Anatomy.—*Turin:* Dr. Giovanni Giuseppe Guyot-Bourg of Geneva has been recognised as *privat docent* of Internal Pathology.—*Vienna:* Dr. Rudolf Loos, *privat-docent* of Odontology, and Dr. Moritz Sachs, *privat-docent* of Ophthalmology, have been granted the title of Extraordinary Professor.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—The vacation session of practical classes commences on Monday next, Sept. 18th, and extends over three weeks. The following are the teaching staff on the various subjects:—Mr. J. D. Mortimer (Anæsthetics), Dr. C. O. Hawthorne (Clinical Examination of the Nervous System), Dr. J. E. Squire (Clinical Methods and Physical Diagnosis), Dr. J. Campbell McClure (Clinical Examination of Gastric Contents), Dr. F. W. Price (Clinical Studies of the Heart by the Newer Methods, including the Polygraph), Mr. J. Swift Joly (Cystoscopy), Mr. J. M. Flavelle (Electro-Therapeutics and Diagnosis), Dr. F. J. McCann (Gynæcology), Mr. J. Jackson Clarke (Intestinal Surgery), Mr. J. Gay French (Laryngology), Dr. J. Fletcher Little (Massage and Medical Electricity), Dr. R. E. Bickerton (Ophthalmology), Mr. Laming Evans (Orthopædics), Dr. Dan McKenzie (Otology), Mr. W. Stuart-Low (Rhinology), Dr. F. Harrison Low (Roentgen Rays), Mr. P. Maynard Heath (Sigmoidoscopy), and Mr. J. M. G. Swainson (Surgical Anatomy and Diagnosis). The composition fee for certain of the classes and the separate fees for each class and for the tutorial classes directed at the higher examinations can be obtained, together with information as to the days and hours on which the classes meet, from the Medical Superintendent, the Polyclinic, 22, Chenies-street, Gower-street, London, W.C. Private tuition is also offered in the ophthalmoscope, laryngoscope, otoscope, cystoscope, sigmoidoscope, sphygmograph, sphygmomanometer, &c.

THE judges appointed to examine and report on the exhibits at the Festival of Empire have awarded to Messrs. Newton, Chambers, and Co., Limited, a Grand Prix for their Izal disinfectant preparations.

A DENTAL SCHOOL FOR LONDON HOSPITAL.—A quarterly court of the governors of this hospital was held on Sept. 6th, Mr. G. E. Maurice presiding, when a vote of sympathy was passed with the relatives of Mr. John Hampton Hale, who had been chairman of the institution. At this meeting a committee reported that the governors had approved of a dental school at the hospital.

NEW HOSPITAL FOR AXMINSTER (DEVON).—The foundation-stone of the new Axminster Cottage Hospital was formally laid on Sept. 6th by Mr. R. Cornish, the president of the hospital, in the presence of a large gathering. The old hospital, founded in 1866, has for some time been found to be inadequate for modern requirements, and the inhabitants of Axminster decided to erect a new institution "in memory of His Majesty King Edward VII., and to celebrate the Coronation of King George V." The cost of the new building will be about £2000.

DEVON AND CORNWALL EAR AND THROAT HOSPITAL, PLYMOUTH.—The committee of this hospital has issued an appeal for funds for erecting new buildings for the charity. The hospital has been established about 25 years, and for some time it has been apparent that larger premises must be provided. A scheme has been prepared, at an estimated expenditure of £2000. The Charity Commissioners have sanctioned the sale of stocks representing legacies valued at £1214 towards the cost of the undertaking, and consequently about £800 still remain to be obtained, and this sum, it is hoped, will shortly be raised as a result of the appeal.

CONSUMPTION AND SANATORIUMS IN CANADA.—According to a paper published by Dr. C. D. Parfitt in the August *Dominion Medical Monthly*, Canada now possesses 20 or more sanatoriums and special hospitals for the treatment of cases of tuberculosis of the lungs. This is the outgrowth of 14 years. Twelve of these are in the Province of Ontario, with 547 beds, and during the past year 1421 patients were treated. It is estimated that the actual number of patients alone with tuberculosis in Ontario is 10,000, and that 171,000 of those now living in the province will die from tuberculosis, according to the present death-rate, at the rate of 2500 yearly.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. J. T. Johnson, the Birmingham General Hospital, the Queen's Hospital, Birmingham, the West Bromwich Hospital, and the Walsall Cottage Hospital will each receive £1000.—Mrs. S. Pierce has bequeathed by her will £1000 to the Manchester Royal Infirmary, £500 each to the Manchester Hospital for Consumption, the Manchester Hospital for Cancer, and the Crippled Children's Help Society, and £250 each to the Royal Society for the Prevention of Cruelty to Animals and the National Society for the Prevention of Cruelty to Children.—Mr. Abraham Greenwood Eastwood left £1000 to the Royal Halifax Infirmary to endow a bed in the children's ward.—The late Mr. J. E. Yonge of Brixton has bequeathed £500 to the South Devon and East Cornwall Hospital, Plymouth, and £250 each to the Plymouth Public Dispensary; Royal Eye Infirmary, Plymouth; St. Elizabeth's Convalescent Home, Plympton; and the Ear and Throat Hospital, Plymouth.—The late Dr. Samuel Jones Gee has left the residue of his property, amounting to about £20,000, to his daughter for life, with contingent remainder to the Royal College of Physicians of London, upon trust as far as possible to form a permanent endowment fund for the College.—The late Mr. Johann Jacob Michael Hermann Spies has bequeathed the

ultimate residue of his property, amounting to about £6000, with contingent remainder equally between the Hospital for Women, Soho-square, the National Hospital for Diseases of the Heart, Soho-square, the London Hospital, the German Hospital, the North Wimbledon Cottage Hospital, the South Wimbledon Cottage Hospital, the London Orphan Asylum, Watford, the Infant Orphan Asylum, Wanstead, and the Society for Granting Annuities to the Poor Adult Blind.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, London, E.C.

A Pocket Atlas and Text-book of the Fundus Oculi. With Note and Drawing Book. Text by G. Lindsay Johnson, M.A., M.D., F.R.C.S. With Drawings from Life by Arthur W. Head, F.Z.S. Price 10*s.* 6*d.* net.

A Memoir by Sir Samuel Wilks, Bart., M.D., LL.D., F.R.S., on the New Discoveries or New Observations made during the time he was a Teacher at Guy's Hospital. Price 3*s.* 6*d.* net.

ARNOLD, EDWARD, London.

Notes on Practical Physics. By A. H. Fison, D.Sc., Lecturer on Physics at the Medical Schools of Guy's Hospital and London Hospital. Price 3*s.* 6*d.*

Experimental Pedagogy and the Psychology of the Child. By Dr. Ed. Claparède, Professor of Experimental Psychology at the Geneva University. Translated from the Fourth Edition of "Psychologie de l'Enfant et Pédagogie Expérimentale" by Mary Louch and Henry Holman. Price 5*s.* net.

A Handbook of Organic Analysis, Qualitative and Quantitative. By Hans Thacher Clarke, B.Sc. Lond., A.I.C., Lecturer on Stereochemistry in University College, London. With an Introduction by J. Norman Collie, Ph.D., LL.D., F.R.S., Professor of Organic Chemistry in University College, London. Price 5*s.* net.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

The Medico-Chirurgical Series, No. 3. Arthritis. A Study of the Inflammatory Diseases of Joints. By Peter Daniel, F.R.C.S. Edited by James Cantlie, M.A., M.B., C.M. Aberd., F.R.C.S. Eng. Price 12*s.* 6*d.* net.

BLACK, ADAM AND CHARLES, London.

The Grammar of Science. By Karl Pearson, M.A., F.R.S. Part I.: Physical. Third edition, revised and enlarged. Price 6*s.* net.

BOARD OF TRUSTEES OF BELLEVUE AND ALLIED HOSPITALS, New York.

The Bellevue Hospital Nomenclature of Diseases and Conditions, with Rules for the Recording and Filing of Histories. Compiled by the Committee on Clinical Records, composed of Robert J. Carlisle, M.D., Warren Coleman, M.D., Thomas A. Smith, M.D., Edmund L. Dow, M.D. Adopted by the Board of Trustees, 1903. Revised and made to Conform to the International Classification, 1911. Price not stated.

FALCONER, JOHN, 53, Upper Sackville-street, Dublin. BAILLIÈRE, TINDALL, AND COX, London. THIN, JAMES, Edinburgh. WRIGHT, JOHN, AND CO., Bristol.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XXIX. Edited by J. Alfred Scott, M.A., M.D., F.R.C.S.I., General Secretary; Professor of Physiology, Royal College of Surgeons in Ireland. Price not stated.

HILTON AND CO., 109, College-street, Calcutta, India.

Enteric Fever in the Tropics. By B. N. Ghosh, I.M.S. (Cal. Univ.), Lecturer on Materia Medica and Therapeutics, Calcutta Medical School and College of Physicians and Surgeons of Bengal. Price 12 annas, or 1*s.*

HODDER AND STOUGHTON, London, New York, Toronto.

Three Thousand Years of Mental Healing. By George Barton Cutten, Ph.D., Yale, Author of "The Psychological Phenomena of Christianity." Price 6*s.* net.

KEENER, GEORGE, AND CO., 16A, Red Lion-square, London.

Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science. A Manual of Practical Psychotherapy. Designed especially for the General Practitioner of Medicine and Surgery. By Henry S. Munro, M.D., Omaha, Nebraska. Third edition, revised and enlarged. Price 18*s.* net.

KIMPTON, HENRY, London. STENHOUSE, ALEXANDER, Glasgow.

A Manual of Clinical Diagnosis by Means of Laboratory Methods. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Experimental Medicine at the College of Physicians and Surgeons, Baltimore, Maryland. Seventh edition, enlarged and thoroughly revised. Price 21*s.* net.

A Manual of Practical Hygiene for Students, Physicians, and Health Officers. By Charles Harrington, M.D., late Professor of Hygiene in the Medical School of Harvard University. Fourth edition, revised and enlarged. By Mark Wyman Richardson, M.D., Secretary to the State Board of Health of Massachusetts. Price 21*s.* net.

LAURIE, T. WERNER, Clifford's Inn, London.

An Oberland Châlet. By Edith Elmer Wood. Price 6*s.* net.

The Cathedrals of Central Italy. By T. Francis Bumpus. Price 16*s.* net.

METHUEN AND CO., LIMITED, London.

Body and Mind. A History and a Defence of Animism. By William McDougall, M.B., formerly Fellow of St. John's College, Cambridge; Reader in Mental Philosophy in the University of Oxford. Price 10*s.* 6*d.* net.

MEUSSER, HERMANN, Steglitzer-strasse, 58, Berlin.

Bibliothek der physikalisch-medizinischen Techniken. Unter Mitarbeit hervorragender Fachgelehrter herausgegeben von Heinz Bauer. Band I. Das Röntgenverfahren in der Chirurgie. Von Dr. Alban Köhler, Spezialarzt für Röntgenologie in Wiesbaden. Price M.5.75.

SPRINGER, JULIUS, VERLAG VON, Berlin.

Technik der Thoraxchirurgie. Von Dr. F. Sauerbruch, O.Ö. Professor, Direktor der Chirurg. Universitätsklinik Zürich, und Dr. E. D. Schumacher, Privatdozent, I. Assistent an der Chirurg. Universitätsklinik Zürich. Price, bound, M.24.

STANFORD, EDWARD, 12, 13, and 14, Long Acre, London, W.C.

British Rainfall, 1910. On the Distribution of Rain in Space and Time over the British Isles during the Year 1910. By Hugh Robert Mill, Director of the British Rainfall Organisation. The Fiftieth Annual Volume. Price 10*s.*

STOCKWELL, ARTHUR HENRY, 19, Ludgate-hill, London, E.C.

Solar Life: the Desire of All; or How to Live Happy for Ever. By Thomas May. Written in the Year of the Sun, and of the Christian Era, 1911. Price 1*s.* net.

SUPERINTENDENT GOVERNMENT PRINTING, India, Calcutta.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 46. Malaria in the Punjab. By Major S. R. Christophers, M.B., I.M.S., Assistant to the Director, Central Research Institute, Kasauli. Price, Rs.2, or 3*s.*——No. 47. Dysentery and Liver Abscess in Bombay. Being the Report of an Enquiry carried out by Major E. D. W. Greig, M.D., D.Sc., I.M.S., and Captain R. T. Wells, M.A., M.B., I.M.S. Under the direction of the Director, Central Research Institute, Kasauli. Price Rs.2, or 3*s.*

UNIVERSITY PRESS, Cambridge.

Observations upon the Natural History of Epidemic Diarrhœa. By O. H. Peters, M.D., D.P.H. Price 7*s.* net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

A Synopsis of Surgery. By Ernest W. Hey Groves, M.S., M.D., B.Sc. Lond., F.R.C.S. Eng. Third edition, revised and illustrated. Price 9*s.* 6*d.* net.

The New Physiology in Surgical and General Practice. By A. Rendle Short, M.D., B.S., B.Sc. Lond., F.R.C.S. Eng. Price 4*s.* 6*d.* net.

Our Baby: for Mothers and Nurses. By Mrs. J. Langton Hewer, Certified Midwife; late Hospital Ward Sister. Thirteenth edition, illustrated (eighty-third thousand). Price, paper, 1*s.* 6*d.* net; leather, 2*s.* 6*d.* net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London. WOOD, WILLIAM, AND CO., New York.

Joint Tuberculosis. By Leonard W. Ely, M.D., Consulting Orthopædist to the County Hospital, Attending Orthopædist to the Children's Hospital, Denver, Col. Price 12*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CARR, T. E. ASHDOWN, M.B., B.S. Lond., has been appointed Resident Assistant Surgeon to the Cheltenham Eye, Ear, and Throat Hospital.

CROLY, H. P., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Charlbury District of the county of Oxford.

STEVENS, B. C., M.D., M.S. Durh., D.P.H., has been appointed Medical Officer of Health and School Medical Officer of the Borough of Hartlepool.

STUART, FRANCIS W., M.B., B.S. Aberd., has been appointed Senior House Surgeon at the Coventry and Warwickshire Hospital.

WELSH, R. C., M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Biggleswade District of the county of Bedford.

WHITEHOUSE, W. H., M.D. Durh., D.P.H., has been appointed Medical Officer of Health of the Borough of Deptford.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BERKSHIRE EDUCATION COMMITTEE.—Assistant Medical Inspector of Schools. Salary £300 per annum.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 per annum, with rooms, rations, laundry, and attendance.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing. Also House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

BRITISH LYING-IN HOSPITAL, Endell-street, W.C.—Resident Medical Officer. Salary at rate of £50 per annum, with board, lodging, and washing. Also Physician.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £70 per annum, with board, apartments, and laundry.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with rooms, board, washing, and attendance.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £125 per annum. Also Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum. With board, apartments, laundry, &c., in each case.

DREADNOUGHT HOSPITAL, Greenwich.—Two House Physicians and Two House Surgeons, all for six months. Salary in each case £50 per annum, with board, residence, and washing.

DUNFERMLINE CARNEGIE DUNFERMLINE TRUST.—Assistant Medical Officer. Salary at rate of £250 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician and House Surgeon. Salary in each case at rate of £75 per annum, with board, residence, and laundry.

EDINBURGH SCHOOL BOARD.—Assistant Medical Officer. Salary at rate of £250 per annum.

EDMONTON UNION INFIRMARY, 77, Bridport-road, Upper Edmonton.—Second Assistant Medical Officer, unmarried. Salary £120 per annum, with residential allowances.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—Ten qualified Clinical Assistants.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, apartments, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—House Physician for six months. Salary at rate of £70 per annum, with board and residence.

HASTINGS, EAST SUSSEX HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing. Also Assistant House Surgeon. Salary at rate of £50 per annum, with residence, board, and washing.

HOSPITAL FOR WOMEN, Soho-square, W.—Resident Medical Officer for six months. Salary at rate of £60 per annum.

HUNTINGDON COUNTY HOSPITAL.—House Surgeon. Salary at rate of £80 per annum, with board, &c.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Physician. Salary £120 per annum, with board, lodging, and laundry.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with residence, board, and laundry.

LEEDS MATERNITY HOSPITAL.—Vacancy for Female on Honorary Staff.

LEICESTER BOROUGH LUNATIC ASYLUM.—Medical Superintendent. Salary £800 per annum.

LEICESTER CORPORATION ISOLATION HOSPITAL.—Resident Medical Officer. Salary £150 per annum, with board and residence.

LISTER INSTITUTE OF PREVENTIVE MEDICINE.—Assistant Bacteriologist. Salary £250 per annum.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle-street.—Honorary Assistant Surgeon.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £100 per annum, with rooms, attendance, board, and washing.

MANCHESTER. BAGULEY SANATORIUM.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer, unmarried. Salary £150 per annum, with board and residence.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Senior and Junior House Surgeon, each for six months. Salaries at rate of £100 and £80 per annum respectively, with apartments, board, attendance, and laundry.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £60 per annum, with board, residence, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, &c.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

PRESTON COUNTY ASYLUM, Whittingham.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

PRESTON ROYAL INFIRMARY.—Senior House Surgeon, unmarried, for six months. Salary £80 per annum, with board, residence, and washing.

PRETORIA LUNATIC ASYLUM.—Junior Medical Officer. Salary £360 per annum, with quarters, rations, fuel, light, washing, and attendance.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Third House Surgeon. Salary at rate of £50 per annum, with board and residence.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon, unmarried, for six months. Salary £100 per annum, with board, residence, and washing.

ROYAL SUSSEX COUNTY HOSPITAL.—Two Assistant House Surgeons, unmarried. Salary in each case £80 per annum, with board, apartments, and laundry.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Dental Surgeon.

ST. GILES INFIRMARY, Camberwell.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salary of Second Assistant is £150 per annum, and Third Assistant £140 per annum, with apartments, board, and washing.

ST. MARY'S HOSPITAL, London, W.—Surgeon.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Resident House Surgeon. Salary £80 per annum, with board and residence.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and laundry.

WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with rations, washing, and apartments.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Act at Beverley, in the county of York; at Crossabeg, in the county of Wexford; and at Whitehouse, in the county of Antrim.

Births, Marriages, and Deaths.

BIRTHS.

CUNNINGHAM.—On Sept. 11th, at Sussex-place, Regent's Park, the wife of J. F. Cunningham, F.R.C.S., of a daughter.

PENROSE.—On Sept. 11th, at West Bar, Banbury, to Dr. and Mrs. N. C. Penrose—a daughter.

WOLSELEY-LEWIS.—On Sept. 8th, at Maidstone, Kent, the wife of H. Wolseley-Lewis, M.D., F.R.C.S., of a son.

MARRIAGES.

GORDON—BANCROFT.—On Sept. 6th, at St. Mary's Church, Tenby Francis Jervis Gordon, B.A. Cantab., M.R.C.S., L.R.C.P., to Frances Gwendolen, elder daughter of John Bancroft, M.A. Oxon., H.M.I.S.

SALISBURY—MURRAY-WHITE.—On Sept. 11th, at Holy Trinity Church, Murree, Punjab, Francis Hugh Salisbury, Captain, I.M.S., to Ivy, fourth daughter of the late Captain Samuel Murray-White, of the 1st Welsh Regiment.

WALLACE—AYRES.—On Sept. 6th, at St. Barnabas, Kensington, Frederick Wallace, L.R.C.P. Lond., to Caroline Rebecca, elder daughter of the late G. S. Ayres.

DEATHS.

HATTON.—On Sept. 2nd, at Carlsbad, Piers James Hatton, M.B., aged 46 years.

PETTIFER.—On August 23rd, at Weymouth, Edmund Henry Pettifer, M.R.C.S., late of 32, Newington-green, London, aged 83. R.I.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE CROSS-CHANNEL SWIM.

MANY attempts to swim across the English Channel have been made since the late Captain Matthew Webb first accomplished this great feat in August, 1875, but they have all been unsuccessful until on Sept. 6th Mr. Thomas William Burgess repeated Captain Webb's exploit. We reported Captain Webb's great feat of endurance, and now record that of Mr. Burgess, although our readers will probably have all read the details in the daily press. Burgess entered the water at 11.15 A.M. on Sept. 5th, to the east of Dover at a point between the South Foreland Lighthouse and St. Margaret's Bay. The wind was blowing fresh from the north-east and the water was somewhat rough. The tide was at the time flowing eastwardly and carried him in a northward and eastward direction, so that after an hour and a quarter's swimming he was near the South Goodwin Lightship, 3½ miles from the shore, and in three hours he was six miles from the shore east of his starting point. The tide now turned and carried him in a southwesterly direction until, after he had been seven hours in the water, he was three miles south of the Varne Buoy, which lies between Folkestone and Cape Grisnez. On entering the water he had been rubbed all over with lard, and as a protection against the waves and the sun's rays he wore a pair of motor goggles and an indiarubber cap. After being in the water for an hour and a half he drank some hot chocolate, and after four hours he suffered from uneasy sensations, but on approaching the Varne Buoy he felt better, and there was a complete calm on the water towards sunset. Through the ensuing night, which was in every way favourable to him, being very fine and quite calm, he took hot milk, chocolate, and grapes at frequent intervals. From the neighbourhood of the Varne Buoy the second change of tide during his swim carried him in a northerly and easterly direction, until at dawn on Sept. 6th Cape Grisnez bore south-west and Calais south-east. He had now been swimming for about 18 hours, and during the next four hours he had several attacks of weakness and muscular cramp in the left side of the chest, attributed by himself to his use of the over-arm stroke with his left arm, a stroke which he kept up for more than 15 hours at a rate of 24 to the minute. The third turn of the tide during his swim found him about ten miles off Calais and drifted him in a south-westerly direction towards Cape Grisnez, from which he was about a mile distant at 7 A.M.; another turn of the tide was then nearly due, and for a time there was some anxiety lest he might be carried past the cape without being able to land; he was, in fact, carried past it at a distance of 400 yards from the shore, but by a great effort he landed about a mile eastward of Cape Grisnez, near the village of Chatelet. He walked ashore at 9.50 A.M. on Sept. 6th, after having swum for 22 hours and 35 minutes. Burgess is a big man about six feet in height and 40 years of age, and his feat is a wonderful proof of the strength and endurance of the human frame.

HEALTH REPORT OF THE BAHAMAS.

A CENSUS of the Bahama Islands, taken on April 2nd, 1911, gave a total of 55,872 souls, as against 52,735 in 1901. The births in 1910 numbered 2129 and the deaths 1457; birth-rate 3·4 per cent., death-rate 2·3 per cent. According to the report of the acting medical inspector, quoted in the Blue-book of the colony for the year ended March 31st, 1911, the general health has been good. During the autumn and winter months influenza existed in an epidemic form in New Providence district, and on some of the outer islands its propagation has probably been greatly facilitated by means of the dust consequent on a prolonged drought. While many of the cases have been of a severe nature, comparatively few deaths have occurred. There were a few cases of typhoid fever, with two deaths. During the early part of the year a case of small-pox was landed in the colony from Mexico, but prompt measures of isolation and disinfection prevented the occurrence of secondary cases. A few cases of typhus fever were introduced into Ragged Island, but the disease did not spread. The street drainage of Nassau is still in an unsatisfactory condition, but such measures as the finances of the colony justified have been carried out for its improvement. The rainfall (25·71 inches) was unusually low, but the supply of spring-water has been plentiful and good. 622 vaccinations were successfully performed in New Providence, and 1637 on the out-island settlements.

The Bahamas General Hospital, formerly known as the New Providence Asylum, was established in 1809 as a poor-house and hospital for the poor and infirm of the island. Since then the institution has grown steadily, and its functions have been extended in many directions. In 1845 it was placed under a board of commissioners appointed by the Governor, and now comprises the hospital proper, the infirmary, dispensary, lunatic asylum, and leper compound. During the year 718 patients were under treatment, of whom 234 were discharged recovered, 99 relieved, 30 discharged not improved, and 124 died. Every year many cases are received in a hopeless—often moribund—condition. The assistant surgeon visited 1082 cases at their homes. It is probable that the accommodation for lepers (of whom there were eight in the asylum at the end of the year) will in the near future have to be enlarged and improved in view of the compulsory segregation which is under consideration.

The Colonial Secretary's report refers to a movement for the union of the colony with Canada, and suggests that one of the results of the agitation will no doubt be the influx next year of many more Canadian visitors than hitherto, and this "will at least have the effect of giving the colony a free advertisement and of drawing the attention of the public to the great advantages possessed by Nassau as a salubrious winter resort."

HEALTH AND SANITATION IN THE FALKLAND ISLANDS.

A REPORT on the Blue-book of this colony for the year 1910, prepared by Mr. W. A. Thompson, has been received at the Colonial Office. It states, *inter alia*, that the birth-rate for the year was 18·92 per 1000, as compared with 23·08 in 1909, whilst the death-rate was 6·72 per 1000 as against 8·60 in 1909; but it is pointed out that these figures are misleading unless one remembers that the population of the islands is an exceptional one owing to the immigration of young men, who frequently leave the colony when past middle age. Males are greatly in excess of females, the proportion being as much as 3 to 2. No death occurred of persons between the ages of 8 months and 40 years. The rate of infant mortality compares very favourably with that of England, and bears witness to the care which mothers in the islands devote to their offspring. The health of the colony has, with the exception of an epidemic of scarlet fever and influenza, been satisfactory throughout the year. In July influenza attacked at least 50 per cent. of the inhabitants of Port Stanley—the only important settlement. The disease was apparently imported from Buenos Aires, where it was prevalent. The earlier cases were liable to lung complications, and convalescence, as usual in this complaint, was very protracted. Towards the end of the year there was a marked recrudescence of the disease, when in most cases the digestive organs were affected, with severe vomiting and diarrhœa. The Falkland Islands, with their damp, cold climate, will be very liable to this disease.

The Colonial Surgeon (Dr. R. S. Earl) writes: "In spite of the force of the strong prevailing wind, which usually arouses into fatal activity the hitherto dormant tubercle bacillus, it is interesting to note that although diseases of the respiratory system, especially bronchitis, are prevalent here, phthisis and other forms of human tuberculosis are fortunately absent. I have only seen two cases during the 18 months I have been here, and in one of these the disease was contracted in Patagonia. This fact is the more striking as the disease is found in sheep here. Pharyngitis was, as usual, prevalent, and some cases of acute tonsillitis were seen. ..... There can be no doubt that the health of the people in Stanley would benefit if the consumption of alcohol was diminished. In the absence of statistics one does not wish to insist too strongly on personal impression, but I should be surprised if the amount of alcohol consumed per head by the population here is not found to be largely in excess of the average quantity used per head in an English seaport town."

"THE SEASONED TOBACCO PIPE."

IN an annotation under the above heading in our columns of June 3rd we referred to a singular instance of tobacco poisoning due to the use of an old seasoned pipe. It is an axiom amongst smokers that "An old pipe smokes best," but that a pipe well saturated with tobacco-distillation products can be a source of injury to the health of the consumer seems to have been established in the case referred to. Mr. W. H. Yearon, of Messrs. Grant and Co., Ltd., of Riley-street Tower Bridge, London, S.E., suggests, as a means of obviating such a mishap, an aluminium thimble placed in the bowl. To a large extent by this device the tarry oils are prevented, at all events, from entering the bowl and the pipe keeps clean. It is not certain, however, whether the oils do not accumulate in the stem and nearer the mouth of the smoker. We are inclined to think that when special precautions, in the shape of absorbers, condensers, and what not, appeal to a smoker as making smoking a safer habit he had better eschew tobacco altogether.

THE "UNKNOWN TONGUES."

AN old copy of the *Morning Herald* of Oct. 31st, 1831, has just come into our hands, which affords a curiously vivid and matter-of-fact glimpse of the phenomena known in their time as the "Unknown Tongues." These tongues were doubtless the ramblings of victims of imitative mania who were suffering from the over-excitement and mental fatigue caused by the fervid three-hour discourses of Edward Irving, the Scottish divine, whose life and achievements are familiar to many of us, especially to readers of Carlyle. Irving in 1828 had removed from a small and overcrowded chapel in Hatton-garden, London, to a more commodious one in Regent-square, and here on Oct. 16th, 1831, "the public services were interrupted by an outbreak of unintelligible discourse from a female worshipper." Our quotation is from Dr. Richard Garnett's life of Irving. These outbreaks became frequent, and on Oct. 30th, 1831, the church in Regent-square was crammed during morning service. Before beginning his sermon Irving explained his position. "I dare not—I say it is not a matter of option"—he declared, "I dare not for my life prevent the manifestations." Later he was interrupted by a man crying in a loud voice—"God's supporting me. I am ready to be crucified for the true God, but not for the Devil." These and other remarks led Irving to protest and to explain—"All persons who speak in the tongues are known to me; all others are but brawlers." In common with more modern illuminati, he sought to speak of the "unknown tongues" in terms at once rationalistic and critical. He reminds us, indeed, of certain psychical researchers labouring to appear sternly scientific. "If a foreigner," said he, "ignorant of the English language, were now present and he should see me full of action, and my countenance full of intelligence, and if he were to say, because he did not understand me, that what I am now uttering is nothing but gibberish, that would be beyond all things uncharitable. It is not only uncharitable, but the greatest and most grievous sin to deny that it is the work of inspiration."

The earliest speaker of the unknown tongues, a Miss Mary Campbell, who may have been influenced by a perusal of the old travels of George Keate and Captain Henry Wilson, believed that the tongues were the language of the Pelew Islanders, who are Shamanites of Samoan origin in the Caroline Island group (Western Pacific). Irving himself protested that they were "regularly formed, well-proportioned, deeply-felt discourse, which evidently wanteth only the ear of him whose native tongue it is to make it a very masterpiece of powerful speech."

There are, it appears, ancient Greek elements in the following hymn which appeared in the pamphlet of one M'Kerrell, who wrote when the number of the gifted was 15:—

"Hippo gerosto niparos,
Boorastin farimi:
O Fastos Sungor boorinos,
Epoongos menati.
O Deripangito boorin;
Aristos ekrampos
Senoote hypanos noostin,
Hypen hippo booros."

THE TREATMENT OF OBSTINATE PSORIASIS.

To the Editor of THE LANCET.

SIR,—I have a patient who has suffered from psoriasis for 25 years. That on the trunk and limbs answers fairly well to treatment, but on the scalp the condition is intractable. From the daily application of ointment or lotion my patient's life is anything but a happy one. I would be very grateful for any suggestions from your readers as regards treatment. I have tried all the usual remedies without success.

I am, Sir, yours faithfully,

Sept. 12th, 1911. BEATEN.

Hendiadys.—The revolting belief is still common in spite of the spread of education. It need not be said that there exists in medical literature no authentic case of such an occurrence; it would be a physiological impossibility. Popular chap-books detailing the stories of Mary Tofts, of pig-faced ladies, and so on, have popularised a credulity that always existed.

Altruist.—1. The idea is rubbish. 2. See THE LANCET, vol. i., 1897, pp. 368 and 433. 3. Our correspondent is recommended to obtain the name of the tree and communicate personally with the officials in question.

One in Doubt.—The symptom is produced by so many conditions that no one method of treatment can possibly be efficacious. We will consider the suggestion that it might be wise to discuss the matter publicly.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for September, 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
,, 29th–Oct. 26th (Turin).—International Exhibition.
May 3rd–Oct. 31st (Glasgow).—Scottish Exhibition.
,, 6th–Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opens June 14th).
May 12th–Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May 18th–October 31st (London, Shepherd's Bush).—Coronation Exhibition.
,, 19th–Oct. 31st (London).—Earl's Court Exhibition.
Sept. 16th–23rd (London, Agricultural Hall).—Nineteenth Annual Grocery Exhibition and Market.
,, 17th–20th (Turin).—Second National Congress of Guardians of Training Schools and Prisons.
,, 18th–23rd (Sydney).—Australasian Medical Congress.
,, 18th–23rd (Paris).—International Conference of Genetics.
,, 23rd–Oct. 21st (London, Olympia).—Electrical Exhibition.
,, 24th–30th (Karlsruhe).—Eighty-third Meeting of German Physicists and Physicians.
,, 25th–26th (Munich).—Meeting of the International League for Medical Psychology and Psychotherapy.
,, 26th–28th (Louisville, Ky.).—American Association of Obstetricians and Gynecologists.
,, 26th–30th (Brussels).—Third Congress of the International Society of Surgery and Exhibition of Fractures.
,, 28th and 29th (Manchester).—Conference of British Hospitals Association.
,, 28th–30th (Dresden).—International Congress for the Protection of Mothers and Sexual Reform.
,, 29th (Edinburgh).—Association of Veterinary Officers of Health. Annual Meeting.
,, 30th (Bruges).—Sixth Belgian Congress of Neurology and Psychiatry.
September (Genoa).—International Exhibition of Marine Hygiene.
,, (Turin).—Congress of the Association of Italian Railway Physicians.
September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. Graham Little: Clinique (Skin).
TUESDAY.—4 P.M., Dr. C. O. Hawthorne: Clinique (Medical).
WEDNESDAY.—4 P.M., Mr. Gordon Taylor: Clinique (Surgical).
THURSDAY.—4 P.M., Mr. H. Lett: Clinique (Surgical).
FRIDAY.—4 P.M., Dr. Dan McKenzie: Clinique (Ear, Nose & Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Bishop Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), Clinical Theatre, London Hospital, Mile End-road, E.

MONDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Wall: Pulmonary Diseases.

TUESDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Grunbaum: Diseases giving rise to Morbid Renal Excretion.

THURSDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. Head: Diseases of the Nervous System.

FRIDAY.—2 P.M., Demonstration in Clinical Medicine:—Dr. L. Smith: Diseases of the Heart.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1911, which was completed with the issue of June 24th, were given in THE LANCET of July 1st.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1911 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 13th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Sept. 7	30·19	S.W.	...	124	88	61	61	66	Fine
,, 8	30·03	S.	...	128	92	64	63	68	Fine
,, 9	29·94	N.E.	...	75	67	63	63	65	Dull
,, 10	30·21	ENE	...	115	74	55	60	62	Fine
,, 11	30·01	S.E.	...	123	83	58	62	67	Cloudy
,, 12	29·91	S.	...	126	86	62	61	67	Hazy
,, 13	29·89	S.W.	·04	68	63	62	62	64	Dull

The following journals, magazines &c., have been received:—La Clinique Ophtalmologique, Journal of the Royal Institute of Public Health, Canadian Journal of Medicine and Surgery, Public Health, Æsculape, Science Progress, St. Paul Medical Journal, Maryland Medical Journal, Annali di Medicina Navale e Coloniale, Revue Française de Médecine et de Chirurgie, Medical Review of Reviews, Archives de Médecine et Pharmacie Navales, Indian Medical Journal, American Journal of the Medical Sciences, The Abolitionist, Detroit Medical Journal, Journal of Tropical Medicine and Hygiene, Jahrbuch für Kinderheilkunde, Risorgimento, American Medicine, Journal of Physiology.

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